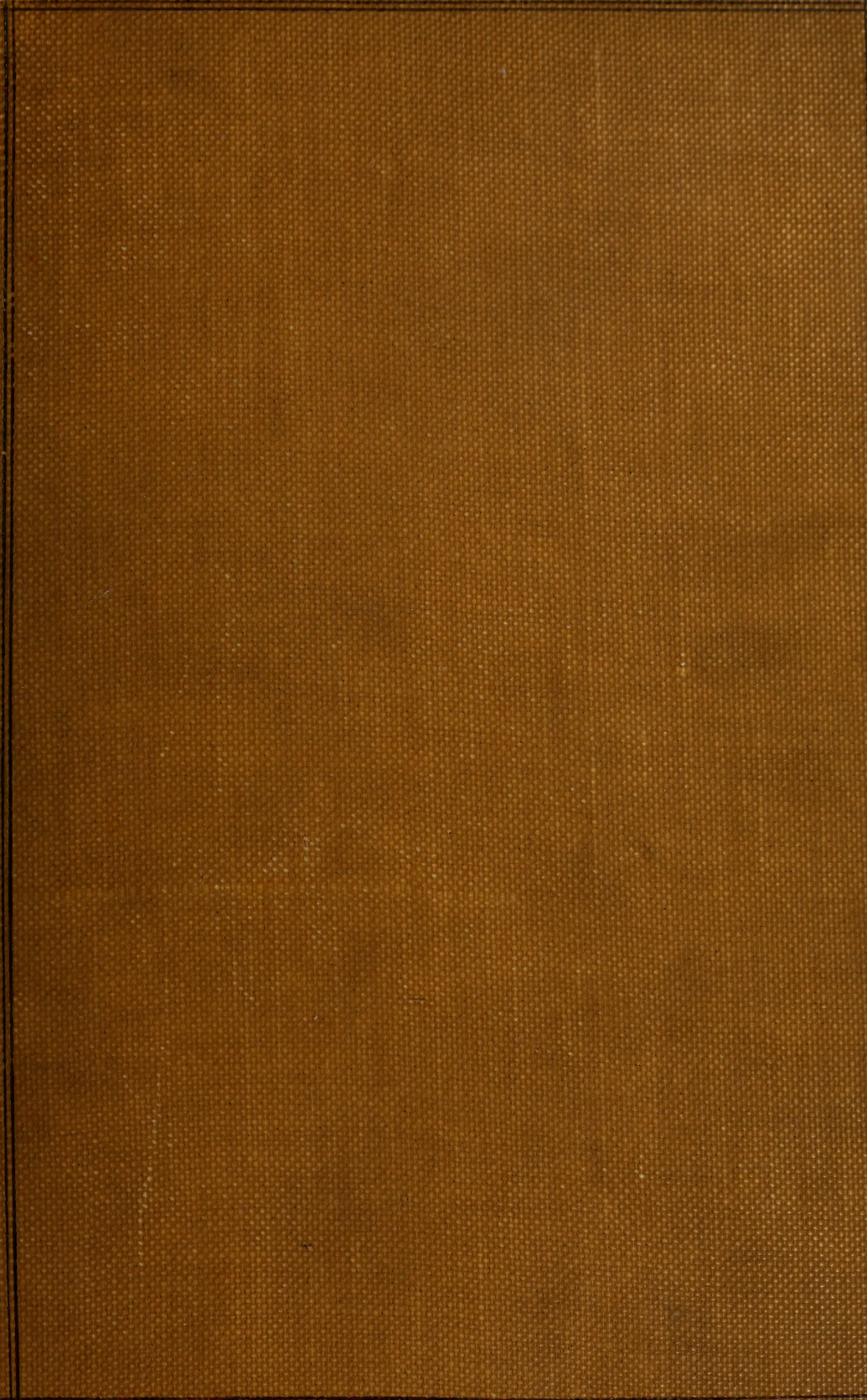
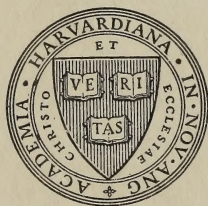




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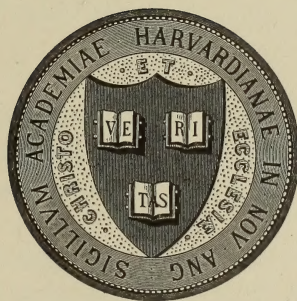


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REPORTS
OF THE
VISITING COMMITTEES OF THE BOARD
OF OVERSEERS

OF
HARVARD COLLEGE

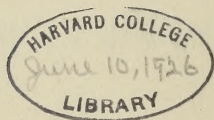
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HARVARD UNIVERSITY.

REPORTS

OF THE

VISITING COMMITTEES OF THE
BOARD OF OVERSEERS.



IN BOARD OF OVERSEERS,
December 17, 1890.

Voted, That the Secretary be instructed to cause the reports of the several Visiting Committees read under Section 29 of the existing By-Laws to be numbered and printed consecutively after they shall have been acted on by this Board.

A true copy of record.

Attest :

ALEXANDER McKENZIE,
Secretary.

I.

REPORT OF THE COMMITTEE ON THE CHEMICAL LABORATORY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

GENTLEMEN: By the invitation of Professor J. P. Cooke, Erving Professor of Chemistry and Mineralogy and Director of the Chemical Laboratory, the Committee appointed by you to visit the Chemical Laboratory met in Boylston Hall in Cambridge on the afternoon of January twenty third of the present year.

On that occasion Professor Cooke presented to your Committee the report which is herewith submitted. This will be found to be a most careful and interesting history of Professor Cooke's department from the insignificant beginning, which he describes, to its present active and efficient condition which has given the College its prominence in the teaching of chemical science.

It will be observed from the report of Professor Cooke that the new method of teaching of elementary chemistry—in which the students perform experiments in the Laboratory—has in two instances led to accidents which might well have been serious, and which in one case was followed by legal proceedings in which it was sought to hold the College liable for injuries to a student. But when it is remembered that only two cases of dangerous accidents have occurred, while thousands of experiments have been successfully and safely performed, it seems hardly necessary to limit this course to such work as is absolutely safe, which would, as Professor Cooke says, emasculate that system of instruction. Inasmuch, however, as both the accidents referred to occurred to students who were "making up work" out of course, and not therefore under the immediate supervision of the Instructor, your Committee suggest that a rule might well be introduced that would prevent any work in the experimental course from being done without such supervision as will secure safety.

Your Committee made a careful examination of Boylston Hall, having in view the changes which the removal of the Mineralogical Cabinet will make possible, and congratulate the instructors and students upon the relief from the overcrowding from which they have so long suffered and which has so seriously interfered with the satisfactory prosecution of their work.

In conclusion, your Committee desire to congratulate the Director, his Associate, and the College upon the publications of the Laboratory, which, permit it to be said, that "no single university among English-speaking people can show as good a record."

For the Committee :

FRANCIS BARTLETT, *Chairman*.

FEBRUARY 6, 1890.

REPORT OF THE DIRECTOR TO THE VISITING COMMITTEE OF THE OVERSEERS.

Since 1876 the results of investigations in this Laboratory have usually been published under the general title of "Contributions from the Chemical Laboratory of Harvard College"; and under this name our Laboratory is known wherever the science of chemistry is cultivated. The Chemical Laboratory was recognized as a distinct department of the University by the appointment of a Director by the Corporation, July 28, 1879; and it has also been so represented in the University Catalogue since the issue of 1882-83. This year for the first time a separate committee has been appointed by the Board of Overseers to visit the Chemical Laboratory; and the Director takes the occasion to put on record a brief history of the rise and progress of the department under his charge.

The writer was graduated with the Class of 1848; and, after passing a year in Europe, returned to the College as Tutor of Mathematics in the autumn of 1849. Before that time there had not been, for many years, any systematic instruction in chemistry given to the undergraduates; and with the increasing prominence of the study at other colleges, the lack at Harvard was strongly felt. Thus it came to pass that within a few weeks after he had entered on his duties as Tutor of Mathematics, the writer was invited (November 28, 1849) to give, in addition to his other work, instruction to the Freshman class in the elements of chemistry; and on May 25, 1850, was appointed Instructor in Chemistry and Mineralogy. His first course of lectures was given during the second term of 1849-50 to the Class of 1853; and the second course, nominally on mineralogy but essentially also on chemistry, during the first term of 1850-51 to the Senior class of that year. At the close of this term on December 30, 1850, he was appointed Erving Professor, and was granted leave of absence for the remainder of the year, which he spent in Europe visiting laboratories and collecting apparatus for instruction.

By the vote of the Corporation appointing the Instructor in Chemistry and Mineralogy, his pay was fixed at one thousand dollars, with

this proviso: "He providing at his own charge the consumable materials necessary in performing chemical experiments"; and as the College possessed no chemical apparatus worth mentioning, the first two courses of lectures were illustrated almost wholly with the material which the writer brought from a small private laboratory which had been fitted up for him when a boy at his father's house in Boston; and it is from such insignificant beginnings that the present establishment has grown.

At the opening of the new College year, 1851-52, the young and inexperienced Professor returned from Europe with a very respectable outfit for that time, purchased, however, almost wholly at his own expense, in virtue of the general agreement among the members of what was then called the Boylston Medical School, that each Professor should provide at his own expense all the apparatus and materials required in his course of instruction; and at the beginning the most onerous — although, unfortunately, the most unsatisfactory — of the duties of the new Professor were those connected with the Medical School. At that time the instruction in this School was given almost wholly by lectures, which were so crowded into four months of the year that the same student constantly attended four lectures in as many consecutive hours; and since no adequate means were provided to enforce the study of all the courses nominally required for the medical degree, the result was that a subject like chemistry, not directly bearing on medical practice, was systematically neglected, and no amount of enthusiasm or striving on the part of the teacher could secure attention from men whose faculties were already over-fatigued.

As the Professor himself had learned the little chemistry he knew by experimenting in his laboratory when a boy, he at once attempted to introduce teaching by experiment into the Medical School, and practical courses were soon established both in qualitative analysis and in medical chemistry. But as such courses could not be adapted to the existing system of the School, they were only tolerated as extras; yet a considerable number of students availed themselves of the privilege, and the only satisfactory work done by the writer in the School was in connection with these courses.

In organizing the chemical instruction in the College, quite as great difficulties were encountered at first as in the Medical School. Here also there was a hard and fast system to which it was necessary to conform. The instruction at that time in the undergraduate department was given almost wholly by recitations from more or less elementary text-books; and besides one experimental lecture, the Erving Professor was expected to hold two recitations each week, the class

being divided for the purpose into as many divisions as the numbers demanded.

The chemical text-books of that date were simply epitomes crowded with facts wholly unrelated to the previous knowledge of the students. Recitations from such books were necessarily dreary enough; and the students who bore the infliction little suspected how their teacher groaned under his task. But this was only the beginning of a long struggle to establish the teaching of experimental science in spite of regulations made wholly in the interest of literary studies. In this struggle a great deal of time and energy was spent; but not wholly in vain, since the way was thus prepared for better things, although the pioneer cannot but regret that he himself had so long to battle in the wilderness.

In those early years every attempt was made to make the required recitations profitable. A text-book (Stöckhardt's *Elements of Chemistry*) written on an experimental basis was found in Germany and translated by the late Miss C. Peirce expressly for this use. The subject was made as real as possible by frequent demonstrations, and some definiteness at least was gained by exercises on chemical reactions and problems. A small book bearing this name was almost the earliest publication of the writer, and it served its purpose in making the study respected in a literary community; but it did this at the sacrifice of all that is distinctive and peculiarly valuable in the study of an experimental science.

As at the Medical School so at the College an immediate attempt was made to establish an experimental course of instruction. The lecture-room at the north end of University Hall was assigned to the department, together with a room on the opposite side of the entry, in which, at the time, was stored the so-called Rumford apparatus; and this was put temporarily under the charge of the Erving Professor, and served a useful purpose in his lectures. The apparatus and chemicals procured as above stated, primarily for use at the Medical School, were made to do double duty; and the frequent transportation of this material between the School and College was a marked feature of the situation. The Rumford apparatus-room served as a private laboratory; but in order to find a working-room for an experimental class the cellar under the lecture-room was floored and fitted up with tables. In this rude laboratory chemistry was first taught experimentally to undergraduate students in this country, — at least so far as the writer knows. The only branches taught were qualitative and quantitative analysis, chiefly the former. Indeed, these were the only branches of which the methods had been worked up into a suitable form for elementary teaching at that time. This practical

course, however, was not recognized by the College Faculty until 1858, after it had been in successful operation for seven years; but a large number of students availed themselves of the opportunities thus offered, although the study was wholly voluntary and received no credit whatever in the College course; and not a few of the graduates of that day will remember that old cellar laboratory, where good work was done and good men educated.

Early in the year 1856 a movement to obtain suitable accommodations for experimental work took definite shape, and plans were drawn by Mr. W. R. Ware for building a small brick laboratory at a cost of about ten thousand dollars; and on July 26 of that year the plans were submitted to the Corporation who gave to the writer an informal consent to solicit subscriptions in behalf of this modest enterprise. He early sought the aid and counsel of the late John E. Thayer, to whose attention the project was warmly recommended by President Walker. Mr. Thayer at once entered into the plan with his usual public-spirited zeal, and promised to give one tenth of the amount required. But at the same time he called attention to the fact that the Corporation then held a fund bequeathed by the late Ward Nicholas Boylston for the erection of an anatomical museum and a chemical laboratory, and suggested that it would be better for the College to increase by subscription the Boylston fund to forty thousand dollars and erect at once the handsome stone building which Mr. Boylston contemplated and which would be an ornament to the College Yard. The wisdom of Mr. Thayer's suggestion was obvious; and in this changed form the subject was again brought before the Corporation at their meeting of August 30 following, and after all the details had been examined by a committee it was decided in favor of Mr. Thayer's suggestion. The subscription was at once opened and seventeen thousand dollars were finally collected, though not without difficulty even with Mr. Thayer's efficient aid. For a financial crisis came on soon after, and the civil war rapidly following, the project must have been indefinitely postponed had it been delayed even for six months. Mr. Thayer himself contributed three thousand dollars, and to his influence the final success was greatly owing.

The contracts were finally signed on January 27, 1857, and the building occupied early in March of the following year. The total cost, including the furnishing, was fifty thousand dollars, obtained as follows:—

Boylston Fund	\$24,000
Subscriptions	17,000
General Fund of the College	9,000
	\$50,000

It was a sad circumstance, however, connected with the opening of the new building that neither Mr. Thayer nor Mrs. Wigglesworth, the two persons who showed the most interest in the undertaking, lived to see its completion.

The greatly increased duties which the growth of the undergraduate department involved, besides circumstances which it is not important to recall, led the Erving Professor, as soon as the subscription was secured, to ask to be relieved from all the duties at the Medical School; and this relief having been freely granted by the Corporation the material belonging to the Professor at the Medical School was for the last time transferred to Cambridge, and furnished the chief chemical outfit of the new laboratory.

As first built, Boylston Hall was admirably adapted to the purposes for which it was intended. It was never anticipated that the whole building would become one large chemical laboratory, comprising every department of the science; indeed a far larger and more comprehensive laboratory than any that existed even in Germany at that time. The laboratory of the Lawrence Scientific School then provided for all graduate or advanced students; and the one general laboratory room in the new building was designed solely for the undergraduates with the single object of making the elementary teaching of chemistry more effective by means of experimental work. The year Boylston Hall was opened there were less than four hundred undergraduates in attendance; and a lecture-room with two hundred seats and a laboratory with forty-eight working places was thought an ample provision not only for the present but for all future needs; so little could the later rapid growth be then foreseen.

From the time the new laboratory was opened qualitative analysis was allowed as an elective study in the Junior year; but it was not until 1868-69 that a second elective (in determinative mineralogy) was secured. A revolution in the general methods of the College was then impending, and the year 1870-71 marked an important change. Up to this time, the whole instruction in chemistry, chemical physics, and mineralogy had been given by the Erving Professor with the aid of one assistant, wholly unpaid or paid only in part by the College. The old recitation and lecture system had continued unchanged; and although quantitative analysis, organic chemistry and even electrical measurements had been taught at times to a few enthusiastic students who would give extra time to laboratory work; yet the only experimental courses recognized by the Faculty were the two above-mentioned and the last only within two years.

But in 1870-71 a reorganization of the whole department in connection with the rest of the College took place under the influence of

President Eliot. The essential courses of a chemical education were systematically laid out; and all placed on an experimental basis. The teaching of molecular physics which had so long burdened the department was transferred to the department of physics. The students in chemistry of the Lawrence Scientific School were transferred to Boylston Hall. A third story was added to this hall which largely increased the laboratory accommodations. An additional assistant was provided; and Mr. C. L. Jackson who had served several years as assistant was appointed Assistant Professor. In 1874 Mr. H. B. Hill, the second assistant referred to above, was appointed Assistant Professor; and since then the number of courses given in the Laboratory has been steadily multiplied, and the number of teachers increased; until the present year when the laboratory corps consists of three professors, one instructor and four assistants, teaching fifteen distinct courses to more than three hundred laboratory students.

Such was the conservatism of the old college system that it was not until 1870-71 that descriptive chemistry was first taught experimentally in this College under the charge of Professor Jackson; and the barren recitation system finally abandoned. This consummation had been as before stated the dream of the writer from the first; but it required twenty years to reach the result. Moreover his own efforts in that direction would have been unavailing had it not been for the sympathy and support of President Eliot. Further it must not be forgotten that while we owe to President Eliot our escape from the toils of a system of teaching which in chemistry at least was as paralyzing to the teacher as it was profitless to the student, we owe to him also in connection with Professor Storer the working out of the first practical system of experimental instruction in descriptive chemistry. The methods of teaching qualitative analysis had been worked out a generation earlier in the German laboratories; and a partial method of teaching general chemistry experimentally had also been elaborated somewhat later in Saxony by Stöckhardt in his book called "*Die Schule der Chemie*," which from the first the writer adopted as the text-book for the compulsory recitations which he was forced to hold. But to Eliot and Storer belong the credit of showing, at the Institute of Technology in Boston, for the first time—at least in this country—the practicability of teaching general chemistry by observation and experiment; and we have every reason to hope that the influence they thus exerted will in time drive out from all our schools and colleges the senseless practice of committing to memory a mass of facts wholly unrelated to the pupil's intelligence. The writer can only regret that he was so long the unwilling agent of such educational folly, although he must claim for himself the small merit of having done his best to

mitigate the evils of a system which he was powerless to change. But the battle against the prescribed methods of the old scholastic system has not yet been wholly won. When will literary scholars learn that there can be no universal system of education? and that what may be intellectual food in one department of knowledge is often poison in another? Physical science has its peculiar methods and its peculiar discipline; and its value as a means of education lies solely in these features. To prescribe for the study of natural science the forms adapted for literary studies is to lose the only real value of such study, or at least to use it for a discipline which can be far better gained by other means. Book learning is a good thing, in some departments the only thing; but physical science can never be learned to any valuable purpose from books. Cramming for examinations is an excellent intellectual discipline, but this is not the discipline of physical science. The ideal educational system of the future will use each study for its own peculiar discipline; and will vary its methods as the ends to be gained demand. Life is too short and vital energy too precious that we can afford to waste intellectual effort, and in the sharp competition of the future a continuance of the present waste will be fatal to success.

Since the experimental method of teaching was adopted the course in general chemistry has been under the direction of Professor Jackson, and its great success has been mainly owing to his intelligent oversight and well-considered methods. The present year there are over one hundred students in the course; and this one course is full work for the teacher in charge. It is the necessary preliminary, and therefore the feeder of all our more advanced courses; and its importance in our system is correspondingly great.

The new scheme of requisitions for College requires that there should be open to Freshmen elective courses corresponding to each of the so-called advanced studies of this scheme. Hence four years ago there was first introduced into the laboratory curriculum a more elementary course in general chemistry than Chemistry 1, referred to above; and the new course is known as Chemistry B. One of the chief objects of this course was to influence the study of chemistry in the secondary schools; but it also meets a demand for a limited training in the methods of experimental science by those undergraduates whose chief interest centres in other studies. Before the recent changes there had been for several years an optional requisition in chemistry, but it was almost invariably met by the cramming of an elementary text-book, and the result was as unsatisfactory as might be expected. It has hitherto been impossible to secure that chemistry should be taught in the secondary schools in accordance with the

true methods and spirit of experimental science. All the school methods and traditions were scholastic, and the teachers themselves had little conception of the nature of the discipline which gives to the study of an experimental science its only real value. Chemistry was learned from a book just as history or grammar was learned, and the knowledge tested by the same senseless repetitions as those which we regard as a mark of barbarism in a Mohammedan school, but with which we suffer our own children to be persecuted. Unfortunately the teaching of chemistry is especially open to this abuse, because the elementary text-books on this subject are epitomes, crowded with facts in regard to the elementary substances and their compounds, which for the average pupil bear no relation whatever to the rest of his knowledge, and must be learned — if learned at all — as unintelligible forms of words.

For a long time the writer had anxiously sought to find some means of remedying this crying evil, and of obtaining from the schools some training in the discipline of physical science comparable to that which has so long been secured in classical studies, a training which would prepare those coming to the University for more serious work in the same direction in their College course.

It was obvious from the first that no effective work could be done in the schools unless the scope of the subject was greatly restricted. It was impossible that the scheme of the chemical elements should be treated at all, for the very brevity that a school course compels would render the only treatment of the subject, possible to be given, fruitless. The writer therefore ventured on the bold plan of wholly breaking away from all the traditions of the subject, and limiting an elementary course on chemistry to the general principles of the science which could be fully illustrated by experiments and enforced without an undue array of facts.

This was the motive of a pamphlet entitled “Descriptive List of Experiments on the Fundamental Principles of Chemistry for use in Chemistry *B*; also for the use of teachers preparing students for the admission examination in chemistry”; first printed by the University in 1886.

Imperfect as work of this kind in an wholly untrodden field necessarily must be, this publication was the product of much thought and experience, and has already accomplished all that could reasonably have been expected. Last year more than fifty candidates passed the laboratory examination on this basis. The new course, moreover, has been introduced into several of the principal preparatory schools, including those of Andover and Exeter; and teachers who have entered into the spirit of the method have been warm in its praise.

With college men the result has been equally satisfactory, and our experience during the last three years will enable us to improve the details of the system when another edition of the pamphlet is required.

In College the classes in general chemistry are a cause of no little anxiety on account of the risk incident to experimental work in the hands of heedless and inexperienced men. Students who have been trained solely in literary studies rarely possess those habits of precision, foresight, and judgment which experimental work imperatively demands. Bad grammar or a blundering translation may indicate wretched scholarship, but rarely entails more serious consequences than a sarcastic reprimand. But a neglect of directions or carelessness in mixing materials may in a chemical experiment maim a man for life. A false quantity in prosody, at the present day, will scarcely do more than cause a smile; but in chemistry it may be fatal. It goes without saying that in all our courses, when the least degree of danger is apprehended, well-considered and exact directions are given before each practical exercise; indeed the caution used would seem excessive to any one who did not know with what heedless subjects we have to deal. Still, with all our caution, accidents do at times happen; and, if rarely serious, the escapes frequently remind us of what might be. Sometimes the men, after being forewarned, incur the risk from mere recklessness, with full knowledge of the danger. Two years ago a student deliberately lighted a hydrogen flask which he knew contained an admixture of air; to see, as he said, if it would really blow up; and last year a man was found, out of hours, rubbing together a considerable amount of sulphur and chlorate of potash in a mortar, to make fulminating powder for the purpose, doubtless, of sprinkling under the feet of students when entering some lecture-room. In this case even the man's neighbors protested; and, when he would not desist, summoned the Instructor. Of course we give to such delinquents short shrift. But only a few weeks ago an earnest, faithful man, working his own way through College, came near losing his sight by inadvertently rubbing together in a similar way red phosphorus with chlorate of potash. A terrific explosion followed, scattering the fragments of the mortar in every direction, and blowing the powder into the man's eyes. By prompt action, and the great skill of Dr. Henry W. Williams — gratuitously bestowed — the man's sight was saved, and no greater damage resulted than the loss of an insignificant amount of property.

On carefully inquiring into the circumstances of this last case the Director could not see how greater care could have been taken than was taken, or gather any suggestions from the experience which would be useful for avoiding similar accidents in future. The man

had finished the somewhat critical work for the day, through which he had been closely watched by the Instructor, who felt that he needed watching, and then, without notifying any one, undertook to *make up*, as the students call it, the experiment of an exercise from which he had been absent. The experiment consisted in making oxygen and burning phosphorous in the gas. As this work was long since passed no preparations had been made for the experiment that day, and the man had to bring together on his desk the apparatus and materials required from different parts of the room; and among other things he procured a bottle of red phosphorous, the substance which he was to burn in the gas when made, and which we always use in this experiment in place of ordinary phosphorous because not liable to spontaneous combustion. Had he spoken to either of the gentlemen in charge they would have dealt out to him the small pinch of red phosphorous required, as is always done at the regular exercise. But he sought out the bottle of red phosphorous, which when in use by the class is carefully guarded, and with whose nature he was fully acquainted, and carried it to his desk. The materials being before him he first weighed out, according to directions, eight grammes of chlorate of potash; and, having poured the salt into his mortar, proceeded to add one fourth of this weight of black oxide of manganese; but, instead, in a fit of absence of mind, took the material from the bottle of red phosphorous; although one powder is black and the other red, one heavy and the other light, and the label RED PHOSPHOROUS, DANGEROUS in large capitals was all the time staring him in the face. There is no question about the facts. I give them as he stated them to me, and from the first he took the whole blame on himself. What was really at fault, however, was an over-worked brain acting mechanically.

I dwell on these facts because they will show the Committee how much we are at the mercy of circumstances that we cannot control. It is easy to say that we should not leave dangerous materials within reach of inexperienced hands; but many of our absolutely essential reagents are dangerous in the wrong place, and to leave out of the course every experiment in which we can foresee any risk would so emasculate the subject as to make the course worthless. Even then we should probably encounter unexpected dangers; and a part of the discipline of the study consists in learning how to direct the forces of nature with security and efficiency. Nevertheless, the overseeing of such a course is very nervous work, and the teacher closes the laboratory door at the end of each practical exercise with a feeling of relief.

It is a further important consideration in connection with the sub-

ject, how far the College can be held pecuniarily responsible for accidents in its laboratories. This question was brought prominently to our notice a few years ago when a student, through neglect of definite directions, blew a quantity of oil of vitriol into his face, endangering his sight, and severely burning the skin so as probably to disfigure him for life. The student blew from his mouth into a form of carbonic acid generator from which he had been told to suck the air, when the too rapidly-formed gas drove out the strong acid contained in the drying flask; and the heedless experimenter added to the gravity of the situation by refusing to wash at once the acid from his face. The father of the student sued the College for damages, but the suit has never been pressed. It is perhaps to be regretted that the case was not tried, since the evidence as to the facts was ample, and the decision must have rested on general principles; and the question is likely to recur at any moment when the facts are less definite. In this instance, as in the accident which has recently happened, the man was making up work out of course, and not therefore under immediate supervision; but it could be proved that he was present when the directions were given, and that he acted in direct contravention to those directions. Can more than this be required of an instructor to absolve the College, whose servant he is, from all responsibility? Otherwise there would be no safety unless each experimenter were under constant oversight, with as many assistants as students; and this condition, it is needless to say, would render experimental teaching impracticable. Fitness for his work and ordinary diligence and caution must be demanded of every teacher who undertakes experimental courses; but more than this cannot be expected, and if expected, cannot be had. The patience and endurance of teachers, as of other men, is limited, and these virtues are already severely tried in the elementary courses which I have described; and it must be understood that the men who elect such courses assume the risk that the work implies.

In 1851, when the writer first became acquainted with the current of chemical thought in Europe, organic chemistry had not yet been wholly emancipated from the superstitious awe with which the constitution of organized materials had hitherto been regarded. Liebig had already, through his theory of organic radicals, made evident to chemists the close analogies he had discovered between important classes of organic products and corresponding mineral compounds; Wöhler had effected his famous syntheses of urea; Dumas had published his well-known memoir on organic types; Laurent had generalized the limited observations of Dumas; and Gerhardt, Williamson, Wurtz, and Hofmann were even then laying the foundations of mod-

ern structural chemistry. But no comprehensive view of the subject had yet been gained; and works on "Organic Chemistry" were filled chiefly with descriptions of the proximate principles of plants and animals. There was little of this material which a teacher could use with profit. Nevertheless, Liebig's works on agricultural and animal chemistry had been published in translation in this country and widely read; and among medical students there was a wholly unintelligent demand for instruction in organic in place of inorganic chemistry, chiefly because the name organic seemed to connect the subject with their profession.

To satisfy this demand as far as possible, the writer prepared a long course of lectures on this branch of his science; and the full notes of these lectures, bound in two thick volumes, still exist, and are a fair presentation of the organic chemistry of that day. They are also a monument of useless labor, except for the practice it gave the young teacher: since the medical students did not know what they wanted, and found little interest in the subject, except in so far as it was a repetition of their *Materia Medica*; and the state of progress which the lectures represented was soon passed.

In College there was no opportunity for many years of either studying or teaching the subject; but its rapid development was followed with great interest, several classes were formed for studying the ever-changing aspects which the investigations of organic products opened to view, and every occasion was taken to direct interested students into that field of study. At last an earnest student was found to devote himself enthusiastically to this special work; and Professor Hill, after learning in Europe the best methods of studying and teaching organic chemistry, returned to us to carry forward with great success this most important branch of our instruction. The course on the "Carbon Compounds" under his direction represents the highest phase in the development of theoretical chemistry, and in spite of its difficulties attracts all the best students in the department. Professor Hill has also sole charge of the large course in Qualitative Analysis, and is associated with the Director in charge of the courses in Quantitative Analysis.

The more advanced courses and courses in research, from the very nature of the case, can only directly benefit a comparatively few advanced students; but, as will be shown further on, they stimulate more than any others the active life of the Laboratory. The advanced students require a great deal of thought and oversight, and this burden is shared by all the professors.

The incumbent on the Erving foundation has been styled Professor of Chemistry and Mineralogy, — at least since 1816, — and the care

of the Mineralogical Cabinet, as well as the teaching of mineralogy, were designated as among the chief duties of the writer on his appointment to this professorship. It was, however, evident from the first that, under the then existing scholastic system, lectures on systematic mineralogy must be a profitless task; and the early courses given by the writer on this subject were, in fact, limited to the common metallic ores and other useful minerals and to their applications in metallurgy and the useful arts. These subjects, however, were, properly speaking, branches of chemistry; and when soon after the course on general chemistry was extended to include them, the separate course on mineralogy was given up, much to the relief of the professor. It was afterwards announced in the College Catalogue for several years that "Mineralogy is taught to those who desire to learn it by Professor Cooke"; and this statement immediately followed a similar announcement in regard to the Hebrew language. There were not many aspirants to either of these singularly associated branches of learning; but mineralogy was quite as popular as the Hebrew language, and from the practice in teaching the subject thus gained, the writer discovered, somewhat to his own surprise, that when made solely a subject for object-lessons the study of determinative mineralogy was an admirable training of the powers of observation, and therefore a disciplinary study of the highest value. The writer was thus led to develop a system of teaching mineralogy by observation alone; and when a laboratory course in chemistry was finally allowed as one of the elective studies of the Junior year, the exercises of the second term were given to mineralogy, while those of the first term were devoted to qualitative analysis; and afterwards when a second laboratory course was allowed, this was limited to mineralogy and crystallography. The course thus established as early as 1868-69 is still given and attracts a large number of students. In addition to this, for the last few years a second course has been given, more limited and technical in its character, dealing only with the common minerals of the rocks and with metallic ores, and including the simpler methods of assaying.

Experimental chemistry and not the natural history aspect of the subject was the writer's early predilection, and he never made a systematic study of mineralogy until it was forced upon him by the exigences of his position. But the subject soon grew upon him and he devoted himself with zeal to developing the collection under his charge; and he looks back with not a little pleasure to his early vacation excursions in search of mineral specimens; in several of which he was accompanied by the present President of the University. This zeal in collecting was greatly sustained by the circumstance that

a mineral collection was then regarded as one of the chief ornaments of a New England college, and a comparison with her sister institutions in this respect was by no means favorable to Harvard.

But in bringing together a collection which shall adequately exhibit the extent and beauty of the mineral kingdom the amount that can be accomplished by private collecting is very limited, and success is a question of money and opportunities. The opportunities are sure to come in time ; but these are of no avail without the means of utilizing them ; and the zeal of the writer would have had little result had it not been for the liberality with which he has been aided by the friends of the College. On four separate occasions he has obtained by subscription the means of increasing the collection amounting in the aggregate to over twenty thousand dollars ; and this sum, together with a small annual grant by the Corporation, and frequent small gifts of his own, have in forty years produced the actual result. There has been great pleasure in the occupation and unnumbered disappointments. How painful it is to be obliged to forego a grand opportunity for the want of the few dollars required for the purchase, only the enthusiastic collector can understand. He knows that the opportunity to purchase a similar unique specimen will never come again ; for such things are usually found in a single pocket of a mine, and rarely recur under like extraordinary aspects. So true is this that it would be impossible with any amount of money to reproduce exactly any old cabinet of minerals. Time is an essential element in bringing together a truly representative collection ; and the collector of a public museum has this consolation that there is time enough ahead, if not for him certainly for those that will come after him. He is fortunate who can make sure of his own acquisitions, and transmit them as a legacy to be multiplied by his successors.

You can then understand the anxiety of the Director in that a collection gathered at the cost of so much time and money should be exposed to the danger from fire incident to an active chemical laboratory, and appreciate his gratitude to the kind and liberal friends who at this emergency have united to provide for the Museum a fire-proof and suitable home where it can not only have room to grow, but where it can be made of the greatest possible use in teaching and extending the science of mineralogy. The walls of the building have been erected already, and besides the large exhibition room there have been provided a preparation room, a room for the Curator, a large mineralogical laboratory and lecture room, besides laboratories for the analysis of minerals and the assay of ores. Since the details connected with the subscription, and with the erection of the mineralogical section of the " University Museum " have recently been stated by the Director

in his report to the President of the University for last year, it is unnecessary to repeat the statements in this place.

The mineralogical collections and laboratory now occupy fully one fourth of Boylston Hall and their removal to the new building will, therefore, open a large amount of space which has long been needed for the extension of the chemical laboratories. The best use of this space will be a subject of careful consideration. It has been proposed to use the present exhibition room on the second story for a large lecture room, which with the galleries could readily be made to accommodate an audience of five hundred persons. The corresponding room on the third story will make an ample organic laboratory, and is especially adapted to this purpose; as it has a large skylight which could be made to afford good ventilation. From the small lecture room on the third story, divided by suitable partitions, we can make a spectroscopy room, a balance room, and a room for organic analysis, all of which are indispensable adjuncts to the larger laboratories. The present mineralogical laboratory on the second story can then be used for meeting the smaller classes. Moreover on the ground floor we shall be able to give more suitable accommodations to Professor Jackson; and by using his present private laboratory as a cloak room, render more difficult the depredations of sneak thieves by which hitherto we have been periodically greatly annoyed.

Still it must be borne in mind that we cannot by any transformations make out of Boylston Hall a first class chemical laboratory of the modern type. We do expect to make it convenient for all manner of chemical investigations; but no such extension of chemical study as has taken place was contemplated in the erection of the building, and it cannot be expected to compare with the large laboratories recently built in Europe at great cost and supported by government grants. Through the kindness of Professor Hill the Director has the opportunity of laying before the Committee the plans of the great laboratory recently built at Zurich by the Swiss government at the cost, with the outfit, of three hundred and forty thousand dollars; and it will be seen that our humble establishment, even in its largest possible expansion, must present a sorry contrast to this magnificence. Results and privileges do not, however, necessarily go hand in hand, and we shall continue to do the best we can with what we have, and are not ashamed of our past record. Nevertheless students are greatly attracted by externals, and in our competition for advanced students we cannot afford to disregard such accessories; and the time will come when there will be a strong demand from our own alumni for a large chemical laboratory of the most recent type. That this demand will be supplied in good season we have no doubt. But

not only the first cost of such an establishment, but also the cost of its maintenance, will be so large — requiring with the endowment at least half a million of dollars — that we cannot expect to obtain the means required by any system of subscriptions, and must wait until some very wealthy friend of the College shall take pleasure in giving this direction to a great benefaction. Let it be fully understood, however, that it is not from any dissatisfaction with our present appliances, but solely from a loyal desire to see Harvard preëminent in every department, and as the only means of securing the ultimate fulfilment of our hopes, that we call attention to this need of the future, and would seek to keep it prominently before the public mind.

Enthusiasm for truth and for learning is the only never-failing source of intellectual life in an institution like ours; and genuine enthusiasm for knowledge can only be sustained by scientific investigation or advanced study. Scientific and literary productiveness are the best indication of scholarly life in the teacher; and it is through the life of the teacher that the life of the student is sustained. Organization, rules, discipline, and the whole machinery of petty politics may be necessary evils of college life, but they have an absolutely deadening influence unless overpowered by the flame of enthusiasm kept ever burning warm and bright. It is, therefore, with no little pride that we are able to point to what our laboratory has done for chemical science.

In the earlier years of its existence the energy of its one teacher was in very great measure spent in the class-room, and in developing its resources. During this period the publications from the laboratory were more or less scattered; but still scarcely a year passed without some result. Since, however, the reorganization of the department in 1870-71, and the division of the responsibility among several teachers, the work of investigation has gone forward continuously and in very definite channels, and the Director has the pleasure of laying before the Committee three octavo volumes in which most of the papers published from the laboratory since 1871 have been collected and bound together. It is not for us to boast, but among ourselves we may say with all modesty that there is not a single university among English speaking people which can show as good a record; and even in Germany, where the cultivation of chemistry is so greatly fostered, it is only at two or three centres of intellectual activity that this record has been greatly surpassed. Of course the value of such publications is not to be judged alone by their volume, for an important discovery may be stated in a few words, and a short paper often contains the results of a year's hard work. To those familiar only with literary work three volumes in

eighteen years might seem a meagre result ; but the actual number of days' work they represent would have filled a small library had it been expended on ordinary book-making.

It should also be remembered that chemistry has technical bearings which are attractive and lucrative, and the singleness with which the active teachers of the laboratory have devoted their spare time during this long period of years to wholly unremunerative scientific work is worthy of more emphatic recognition than it is fitting for the Director to bestow. If the accelerated progress in the past is any sure indication of the future we have every reason to hope that, with the continuance of such zeal, American chemistry will soon hold a prominent place among the intellectual activities of the world.

JOSIAH P. COOKE, *Director.*

II.

REPORT OF THE COMMITTEE ON THE SCHOOL OF VETERINARY MEDICINE.

Colonel CHARLES R. CODMAN, President of Board of Overseers : —

SIR, — After carefully examining the organization and condition of the Veterinary College, as well as outside influences bearing on its efficiency, your Committee would respectfully report that, while in their opinion its administration is as perfect as the restricted condition of its finances will permit, they feel its influence to be far below the proper standard for a department of Harvard University in which so much good to the community might be accomplished if supported by the necessary amount of money.

The want of success in attracting a sufficient number of students is very apparent; and, although increased numbers might furnish the desired financial relief, your Committee feel that nothing short of more ample financial resources will enable the College to furnish those facilities in the direction of clinical instruction which seem essential to attract to it a greater body of students.

While financial matters remain in their present meagre and insufficient state, your Committee fail to see how any suggestion from them can help on the good work for which the College was established.

Yours very truly,

HENRY S. RUSSELL,
E. F. BOWDITCH,
ROBERT H. STEVENSON,
THEODORE A. DODGE.

Boston, April 5th, 1890.

III.

REPORT OF THE COMMITTEE ON THE JEFFERSON PHYSICAL LABORATORY.

TO THE BOARD OF OVERSEERS : —

We, the undersigned, members of the Committee appointed to visit the Jefferson Physical Laboratory, have to report that during the present year there has been — in our opinion — a marked improvement in its organization and conduct with regard to the instruction of undergraduates and the promotion of original research.

A statement that much has been done in the latter direction, is the strongest tribute that can be paid to the zeal, scientific ability, and mechanical skill of the Director and his staff of professional assistants; but we feel that these gentlemen cannot do full justice to themselves or the Laboratory until such time as a fund is established the income of which shall secure to them the services of a skilled mechanician.

The Director indicates clearly the pressing need of the Laboratory in this regard in his last annual report to the President of the University; and the President makes kindly mention of it in his report to the Board of Overseers.

We, in turn, commend this need to most favorable consideration; for we are strongly of the opinion that the acceptance of the magnificent Laboratory building as a gift carries with it an implied trust, on the part of the University, that Science shall receive from it the fruits of original research it is so well fitted to yield.

FRANCIS BLAKE,
WILLIAM H. FORBES,
E. D. LEAVITT,
HENRY M. WHITNEY,
ELIHU THOMSON.

EXTRACT FROM THE RECORDS OF THE BOARD OF OVERSEERS.

The report of the Committee appointed to visit the Jefferson Physical Laboratory was read and accepted.

Voted, That the Board recognizes the importance of the suggestions made in the report just accepted; and that it will heartily endorse any movement toward establishing a fund for promoting physical research at the Jefferson Physical Laboratory.

29 April, 1890.

IV.

REPORT OF THE COMMITTEE ON MODERN HISTORY AND INTERNATIONAL LAW.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY :—

Your Committee has been much tempted to consider the subject of a radical change in the organization of the Historical Department. *It seems to them quite possible that a plan might be adopted whereby any person desiring to deliver a course of lectures on historical subjects, upon demonstrating his fitness so to do, might receive a license from the College government for this purpose.* The capacity of the individual lecturer to interest and stimulate students would thus be given full play ; many persons, profoundly interested in the subject, might be attracted to prove their qualifications as instructors ; and the natural result of the competition would probably be the bringing to the front and retaining permanently the best men for the task. It would seem also that the element of inspiration and a quickening of interest in the students could in no way be more surely secured. If such an experiment is feasible and worth trying there is no department of undergraduate instruction in which it could be made with better prospects of success than in that of history. Your Committee, however, recognizes that this is such a radical change of system that it is perhaps beyond their proper function to recommend it ; nor indeed would they venture actually to *recommend*, without a much more thorough investigation than they have been able to make into the details and difficulties involved in the change. They content themselves for the present with throwing out the suggestion, in the hope that, if it has merit, it may receive consideration by the President of the University.

In making this suggestion the Committee is in no respect influenced by any feeling that the Department, as at present organized, is unsatisfactory. On the contrary, if it be admitted that the present system is the best, or the only practicable one, the conduct of the Department under it deserves only commendation. Indeed, your Committee takes great pleasure in bearing testimony to the zeal, earnestness, and interest which they have found on the part equally of the instructors and the students ; both sides seem to be doing their best and with admirable results. All the conditions of instruction are so immensely in advance of what existed at Harvard within the experience of most gentlemen now upon the Board of Overseers, that

your Committee greatly regrets that they have not time and space to describe the present state of historical instruction. It would be an interesting and a very encouraging and gratifying sketch. But confining themselves to their strict duties they make the following suggestions.

They conceive that the unity of the Department is susceptible of improvement, and needs it. The inter-locking, or correlation of the several courses, is fairly good, but only fairly so; there is a little overlapping, a little disproportion, perhaps an occasional slight hiatus. The parts are only moderately well arranged as going to make up a continuous, inter-related logical whole. Your Committee believes that a more satisfactory relation, connection, and proportion of courses could be achieved. It has been suggested that this could be brought about by establishing one responsible head of the Department; if the right man could be obtained, this might be the best way; but as he should combine that high prestige which gives authority and overrides jealousy, with a faculty for instruction, administrative ability, tact, and remarkable acquirements, it must be admitted that the chance of obtaining him is small. If this cannot be done, your Committee is of opinion that the instructors in the Department should themselves organize into a sort of board or council, to discuss, map out, and agree upon the plan of the Department as a whole; that the parts should be distributed in such a manner as to carry out this plan; and the several courses be defined and allotted with special regard to connection, proportion, and to covering the entire ground, but without duplication. If the instructors could work together in such a board or council in a liberal or friendly spirit, as your Committee hopes and believes that they could, they ought to be able to accomplish some very useful remodelling.

Your Committee is greatly pleased with the efforts that are making for the publication from time to time of historical monographs. Nothing can be more stimulating to first-rate original work, and to preliminary preparation for such work. Besides the professors and instructors there are men in the advanced courses who are capable of doing and are doing excellent work of substantial value, who are able to make and are making investigations which duplicate no previous work and which are well worth preservation and dissemination. Further, apart from the consideration of the desirability of this scheme in the conduct of the Department, no such good means can be found of making known to the world what Harvard College is doing in the way of historical work. Johns Hopkins University by its publications in history has acquired widespread and justly deserved reputation. It may be said to be a legitimate form of adver-

tising and a most efficient and admirable one, since it is by a display of actual results. Why should Harvard hide her light under a bushel? A trifling appropriation of money each year would suffice for this purpose, and your Committee believes that a small sum could not be better expended.

Unpleasant as it is to make recommendations involving the expenditure of money, your Committee is obliged to say that the need for an increase of library service is absolutely indispensable if the Department is to maintain any good degree of efficiency. Much reading is now inevitably required in all the courses, and very great numbers of students select historical courses. The consequence is a scramble for books, of which the supply is lamentably inadequate. The simple truth is that it is physically impossible for students to do what they are required to do, and what they are ready and ambitious to do, unless the College greatly increases the number of copies of the more important books for their use. A score of men tumbling over each other's heels in an eager race to get a chance to snatch first the prescribed volume, is not an edifying sight. Men who wish to do what they are bidden to do ought at least to have the books furnished to them. Your Committee urges emphatically that much greater liberality in providing duplicate copies of books in common use is an imperative duty which the College ought to make every effort to perform. None but the richest students can make such provision for themselves; if the College cannot or will not do it on a greatly more generous scale than it does at present, then its requirements from the large body of students of history are in some degree at least unreasonable.

Your Committee has consulted not only with instructors in the Historical Department, but also with many gentlemen who have lately graduated and taken honors in history. By these gentlemen many suggestions have been made, some of which are embodied in the foregoing paragraphs, and others deserve to be noted as perhaps possessing merit and deserving consideration.

Especially your Committee agrees with the opinion which has reached them from various quarters that the theses of the students in the advanced historical courses should be allowed to count for honors. This seems so obviously proper that your Committee cannot doubt that the mere suggestion will alone suffice to accomplish the change.

It has also been urged, not without a good show of reason, that History I. might be made at least an optional or substitute offering at the examination for admission. But desirable as this would be on some grounds, it is certain that no preparatory schools could at

present bring the students to the point to which this course, as now conducted, brings them. It is a very valuable course.

The work in special reports is generally commended by the graduates who have had experience in it, though they unite in expressing a fear that it may be carried too far, at the cost of the advantages to be derived from a more broad and general study. It cannot be doubted that a careful discretion should be exercised in this respect, in order to avoid the temptation to carry topical study to an excess to the exclusion of wider instruction; and special research should only follow after courses of greater breadth. But your Committee thinks very highly of this "special research"; it interests and stimulates the student; trains him admirably in the use of material; educates him in the methods of doing real work, and compels that thoroughness and accuracy in which young men are apt to be deficient. There seems no sufficient reason to believe that this form of instruction is now given disproportionate importance, though it probably could not be magnified without this objection becoming valid.

It has been also urged that History IX. and History XII. should each be allowed to count for honors in Political Science; that they do not now so count is said to deter many students from taking them. This your Committee does not feel competent to determine, but offer the suggestion for consideration by the President and Faculty.

A general course in modern European history is also asked for, and would seem to be obviously very desirable, if it can be arranged.

For the Committee :

JOHN T. MORSE, JR., *Chairman.*

Presented May 21, 1890.

V.

REPORT OF THE COMMITTEE ON THE PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

Your Committee have been impressed with the unparalleled advantages offered by the Peabody Museum for study and for research. It is indeed a cause for regret that although the collections present opportunities for instruction and investigation rarely equalled and nowhere surpassed in importance, yet students at the University have seldom availed themselves of the advantages offered.

The growing interest in American Ethnology and Archaeology justifies recognition of these branches in the University courses of instruction. The great importance of these subjects, although recognized by learned societies in Europe and already provided for to a certain extent by other universities in this country, has been met only in part at Harvard by the appointment of a Peabody Professor; but no regular course of instruction has yet been given.

The Committee respectfully suggest that lectures, combined with laboratory work, counting as a half-course, be offered as one of the regular branches of instruction, and that special inducements be made to attract advanced students to pursue this line of study. These branches seem to be of sufficient importance to warrant their recognition in conferring the degrees of Ph.D. and S.D.

The need of the Museum for funds with which to furnish the new rooms is pressing, but the Committee are of the opinion that the matters to which they have called attention are of greater importance. Collections, however complete, are of little value except when made a basis of study and investigation.

The salary of the Peabody Professor is in the opinion of the Committee entirely inadequate, and they recommend that an increase be granted him from the College funds.

The Committee also recommend the establishment of fellowships by means of which students wishing to pursue Ethnological and Archaeological studies could be aided in their work.

The Committee are authorized to offer to the Trustees of the Peabody Museum \$10,000 to establish a fellowship in American Archaeology, and have also been offered the sum of \$500 a year for

three years for a similar fellowship, both to be given on condition that a third fellowship shall be assigned by the Corporation of Harvard College to the students of American Archaeology.

AUGUSTUS HEMENWAY,
CHARLES P. BOWDITCH,
T. JEFFERSON COOLIDGE, JR.,
J. WALTER FEWKES,
HENRY W. HAYNES,
FRANCIS M. WELD.

Presented May 21, 1890.

VI.

REPORT OF THE COMMITTEE ON INDO-IRANIAN LANGUAGES.

The department of Indo-Iranian languages has an importance for the University quite out of proportion to the number of students that are attracted to such studies. In our country, for some time to come, that number is likely to be small in comparison with the number in England, where there is a direct practical incentive, or in Germany, where the disinterested pursuit of knowledge is more general than as yet in America. Yet for certain important purposes the indispensableness of Indo-Iranian studies has long since been fully demonstrated. One might as well try to be an astronomer without a knowledge of the calculus, or a physician without the knowledge of chemistry, as to approach the higher problems of philology before obtaining some acquaintance with Sanskrit and its kindred languages ; while the value of such studies to the teacher of the classics, or to the student of the comparative history of religion, philosophy, or jurisprudence is becoming year by year more apparent. Twenty years ago the few American students who had some inkling of the importance of Sanskrit were deterred by the difficulty and expense, due to the lack not only of teachers but also of text-books constructed with proper reference to pedagogical requirements and so published as to be readily and cheaply procurable in America. The publication of Professor Whitney's Sanskrit Grammar and Professor Lanman's Sanskrit Reader has done much to smooth the way for the student ; and Professor Lanman is about to prepare a grammar still more directly adapted to the needs of beginners than any as yet obtainable. In all kinds of progress it is proverbially the first steps that are the hardest, and bearing this in mind it may be said that a fair beginning in the study of Sanskrit has been made at Harvard. During the present year there have been 8 students, of whom 4 are graduates. One is an instructor in the College, who will probably devote himself to teaching the classics ; another is a teacher in one of the large schools of Boston ; a third is pursuing a course of liberal study. Of the undergraduate students the professor reports that they have shown great zeal and industry and have done excellent work.

Small as such numbers are, it may already be observed that Harvard graduates, going to various other colleges and giving instruction in Sanskrit, have done something toward putting the philological study of Greek, Latin, and English upon a broader and sounder basis,

and in the natural course of things this will continue to go on to an increasing extent. Although he has not collected precise statistics, Professor Lanman has observed from the college catalogues not infrequently sent to him, that since the appearance of his Reader and Professor Whitney's Grammar the number of institutions in which courses of instruction in Sanskrit are offered has increased very remarkably; and your Committee cordially agree with the professor in the opinion that "surely the work of Harvard teachers is not and ought not to be restricted to the young men actually gathered within our College walls."

In his Annual Report for the year 1887-88 the President of the University expresses a regret that its resources are not sufficient to provide, to a greater extent than has been heretofore practicable, for the promotion of original research and the advancement of learning, as well as for the instruction and guidance of its students. In the conduct of our University the latter purpose must naturally take precedence, but the former has likewise an importance that can hardly be overrated. At present, while the Indo-Iranian department is less crowded with students than some others, an opportunity is afforded for work which it is highly desirable should be done, and which is sure to add much to the reputation of the University. During his last year's leave of absence, in the course of which he visited Europe and India, Professor Lanman formed a plan for the publication of a Harvard Oriental Series, to be edited by himself with the co-operation of various scholars at home and abroad. The series is intended to include original texts in Sanskrit, Pali, Prākṛit, and Avestan, besides translations, and even systematic treatises upon pertinent subjects. The general plan contemplates printing these works from electrotypes plates, so that until an edition is superseded by something better it need never be out of print and unobtainable, as is often the case with the small European editions of from 300 to 800 copies. It is important that these books should be cheap, and to this end the work of type-setting and electrotyping should be paid for from the annual income of a moderate endowment fund in the hands of the College. Steps have been taken toward raising such a fund, which it is hoped and expected will amount to about \$15,000. Already the proofs of the first volume extend to the 168th page. It is the *Jātaka Māla*, a collection of Buddhist legends, edited by one of the foremost Indianists in Europe, Professor Kern, of the University of Leyden. Professor Garbe, of Königsberg, has nearly ready the text of the *Sāṃkhya-pravacana-bhāṣya*, one of the most important works of the *Sāṃkhya* school of philosophy. Mr. Henry C. Warren, of Boston, has prepared a collection of translations from the Pāli texts of the

sacred books of Buddhism, so chosen and arranged as to give a clear view of the genesis of Buddhistic doctrine. Contributions to the series have been promised by M. Boehtlingk, of the Imperial Academy of Russia, and by Professors Cappeller of Jena, Pischel of Halle, Windisch of Leipsic, and Kielhorn of Göttingen. This is surely a most auspicious beginning for a noble enterprise. If in the course of the next twenty years the College shall put forth a set of volumes, accurate and scholarly, attractive in appearance, and with every convenience for facilitating the acquisition of Sanskrit and the allied tongues, it can hardly fail to have a deep and powerful effect upon the progress of Oriental studies, not only in America, but in the world at large, for no such plan has as yet been conceived and executed in the Occident.

This is perhaps the most proper place to add that during his visit to India Professor Lanman secured for the College nearly 500 mss. through the aid of the agent employed to purchase for the great Bombay governmental collection at Poona. By a most happy coincidence Mr. Fitzedward Hall has made over his extremely valuable collection of about 500 mss., gathered many years ago in India, to the College; so that we now possess nearly 1000 Indian mss. here at Cambridge, and have accordingly by far the most important collection of Oriental mss. in America. The opportunities for the publication of really meritorious essays and investigations by students resorting to this University, through the columns of the *Journal of the American Oriental Society*, and in the volumes of the *Harvard Oriental Series*, when once it becomes an assured success, will be most excellent; while the material is already such as can be found nowhere else this side the Atlantic.

The probability that the University is about to enter upon a course of publications so likely to be interesting and useful in Europe as well as in America suggests to the mind of your Committee an important practical question. It is a question which concerns not merely the department of Indo-Iranian languages, but every department which is engaged, or expects to be engaged, in publishing through the aid of an endowment fund monographs or journals or bulletins in illustration of the special subjects to which it is devoted. It is a question, in short, which concerns the whole University; but inasmuch as the enterprise above described has suggested it quite forcibly to your Committee, we take occasion to mention it in this connection.

In the last Annual Report of the President of the University (for the year 1888-89) there was loosely inserted an interesting list of the University's serial publications; and it was observed in the concluding paragraph of the Report that "the fact that the University had the

means of publishing valuable papers by its officers and students, and securing for them a suitable distribution, will stimulate the production of such papers." This raises the question whether the University at present has the means or is employing the measures best adapted to securing a suitable distribution for its publications. There are some grounds for believing that this question must be answered in the negative. There seems to be on the part of the public a widespread belief that a larger quantity of original scientific work is done at the Johns Hopkins University than at Harvard. If this belief is not founded upon fact, it is unfair and probably to some extent deleterious to Harvard. It is the opinion of your Committee that this belief is not borne out by facts, but is to be explained by the circumstance that the Johns Hopkins University employs more systematic and effective measures for letting the public know what it is accomplishing. That broadside, laid loosely under the cover of the Annual Report, and thus brought to the notice of a very few people, is by no means an equivalent for the judicious advertising done by the University at Baltimore under the supervision of its able publication agency. There is nothing meretricious in this advertising; it is simply telling students all over the country how to get possession of valuable aids to their work.

The publications of our University, as the President reminds us, "will naturally be various in form and quality; they may or may not be serial, and they may or may not be issued through an ordinary publishing house; they may be of such general interest as to command a sale, or they may be so technical as to be read by a few specialists only." Doubtless in the long run the best work of the University must find expression in books too learned and technical to command a sale, or to attract publishers desirous of making a profit. The expense of publishing such works will naturally be borne by funds established for the purpose. The question then arises whether the University would not do well to have some permanent publication agency, or department of publication, with a permanent functionary at its head, such as the Johns Hopkins University has now had for some years. It would naturally be the business of such a department, under the supervision of some special committee, perhaps a committee of the University Council, to superintend the publication and sale of all serials and other works issued by the University at the expense of its various publication funds. Permanency of name and habitat should by all means characterize this publishing department, so that Harvard University should come to be known all over the world in this capacity, so that a scholar in Finland or Armenia would know how to address to it an order for books as

readily as he would address such an order to such an ancient and honorable firm as for example that of Brockhaus. Upon the title-page of all the publications there should be a characteristic imprint as unmistakable as, for example, that of Aldus. Into each book should be sewed a list of all the publications of the University, with an announcement, in clear, heavy type, of the post-office address to which orders for books and checks in payment for the same should be sent, and this address should contain the characteristic name or imprint to be found upon all title-pages.

These points having been established, a certain amount of advertising should be done by this publishing department. Through the appropriate channels it should give information to the scholarly and scientific world of the scholarly and scientific publications of the University. Such advertising is not of the meretricious sort so common in our time, nor need it be so costly as the advertising in which publishing houses are wont to engage. It is not an affair of puffing ephemeral novels in the columns of a newspaper; it is an affair of bringing the publications of the University to the notice of scientific men and scholars who are on the look-out for such things and are only too glad to learn how and where they can obtain them. It requires at most the insertion of simple and modest lists in the most appropriate monthlies or quarterlies in America and in Europe, at proper and regular intervals; and this need not be very costly. It is the opinion of your Committee that such concentration of the publishing work of the University and such judicious and proper advertising would redound to the credit of the University and strengthen its influence and reputation at home and abroad in a thoroughly wholesome way.

It is well for universities and other learned bodies to publish learned books for the use of scholars whose business it is either to carry on the work of original research or else to disseminate the results of investigation and thus benefit the general public. In either of these ways the work is helpful to mankind. But as many generous spirits, who wish to help their fellow-men, think their work is done when they have got a new statute enacted, and quite fail to take account of the difficulty there may be in enforcing the statute; so it is liable to fare with the publications of learned bodies. Take for example the *Journal of the American Oriental Society*, — a treasury of superb scholarship; how are American scholars to get it, and still more, how are European scholars to get it? It is almost a misuse of language to say that it is *published*. It is *printed*, and then packed away in some alcove or cupboard in New Haven. Copies are sent for sale to an eminently respectable shop in New York. The sales are naturally

too small to awaken the shop's interest in the book. Of advertising there is virtually none, or so little that European scholars, doubtless few in number, athirst for the book, do not know whom to address, or how to get it. Thus the society fails to do the work it ought legitimately to do, and the world fails to profit by its labors. The result is so trivial that years pass by before the bookseller thinks it worth while to send in an account of his sales. In the pressure of his business, this is an affair to which he applies the maxim, *De minimis non curat lex*.

Now if this Journal were to be published, like the Johns Hopkins University Studies in Political Science and History, with a proper indication as to how and where it could be obtained, it would doubtless reach fourfold the number of scholars that it now reaches; and the interests of Oriental scholarship, as well as the reputation of the United States for work in that department, would be sensibly enhanced.

Through its publication agency the University might at regular intervals — perhaps quarterly — publish a bulletin or catalogue of its literary productions somewhat like those of Brockhaus and Trübner. It would be a highly creditable one.

It is apt to be the case that any executive office or department, when once established, tends to increase the scope of its activity and the number of its functions. Professors and other persons connected with the University who write books, will naturally seek the publishers who offer the most favorable terms or can handle the books most profitably. It is not improbable that the reputation of the University's publishing department might become such as to make it an advantageous channel for the publication of the writings of some individual authors, as well as those published by the University from its endowment funds.

This whole subject of a publication agency is full of suggestions; but it is the wish of your Committee to avoid encumbering the case with details, or urging it with undue presumption. But to illustrate its practical importance we may, in conclusion, cite from the President's Annual Report for the year 1886-87. It is there observed that "the number of graduates of other colleges who attend this [the graduate] department, though increasing of late, is still far from satisfactory. Not a single graduate of any other college than Harvard was studying either history or political science at Cambridge in 1886-87, and only five such graduates are pursuing one or other of those subjects at the University during the current year. These facts seem to prove that the advantages offered here to advanced students of history and political science are practically unknown beyond the

University precincts. It may be that some improvement in this respect will be wrought by the publication for the University of the Quarterly Journal of Economics, the first number of which appeared in October, 1886, and which has already won for itself an honorable place among economic serials."

This quotation seems very much to the point. As students are apt to be drawn to institutions where the best work is done and by the most eminent masters in their several departments, it appears in the highest degree probable that an organized and systematic method of publication would soon show results in an increased number of students and a general strengthening of the University. In the hope that enough has been said to indicate clearly the nature of the need which is felt, our report is respectfully submitted.

GEO. W. WALES,
JOHN FISKE,
HENRY C. WARREN.

Presented June 11, 1890.

VII.

REPORT OF THE COMMITTEE ON THE ARNOLD ARBORETUM.

The Committee appointed to visit the Arnold Arboretum beg leave to make the following report : —

In the first week in June, on invitation of Professor Sargent, they visited the Arboretum.

As shown by the maps of Professor Sargent, this Arboretum is laid out on a more extensive and thorough scale than anything of the kind in the world. The agreement under which the Arboretum was laid out and arranged is probably known to most of you, but to such as may not know, it may be well to state that the City of Boston builds the roads, keeps them in order, and polices them and the grounds. The College takes charge of planting the trees and taking care of the grounds.

Trees and shrubs are planted according to a carefully designed plan. A section is devoted to every kind of hardy tree. In each section a tree is planted which is supposed to represent a handsome specimen tree of the kind. Near by are planted a number of the same kind of trees together, to grow up as they naturally would in a grove. The same plan is carried out with regard to all the hardy shrubs in accordance with the terms of Mr. Arnold's will.

Each tree that has been planted has a certain number assigned to it, and on a comprehensive plan of the whole Arboretum, showing where each tree is planted, this number is marked. In a book of records kept at the office of the Arboretum this number is entered, and against it is the history of the tree ; where it came from, when it was planted, and everything that is known about it. A corresponding tag is also placed upon each tree when it is planted. Should this tag, however, be lost, as such tree is topographically placed on the plan, it can always be referred to and its full history known. The thoroughness of this work, and the amount of labor that has been expended upon it, merit the greatest praise, and your Committee feel that too much credit cannot be given to Mr. Sargent and his able assistants, Mr. Faxon and Mr. Jack. When finished, the Arboretum will be a credit to the University, the City of Boston, and the State of Massachusetts.

An interesting addition to the Arboretum is the planting of native shrubs all over the ground, completely covering it. The theory of Professor Sargent in doing this is that these shrubs will hold leaves

and keep the ground from drying up, and in doing so will also furnish material for enriching the ground. In addition to this, the care of such ground is much less expensive than a lawn, which has to be carefully kept, and requires a great deal of labor to keep it in good condition.

The work in the Arboretum so far is about half completed, and the laying out and building by the City of the rest of the roads, it is hoped, will be speedily done in order that the College may complete their part of the contract by planting trees, as agreed upon.

In connection with the Arboretum there is an interesting nursery of shrubs and trees. Everything new is planted here to be experimented upon, under the care of an able gardener, Mr. Jackson Dawson, a man who has the most decided talent in this direction.

In one of his own houses at Brookline, Professor Sargent has a most valuable collection of woods, representing almost every kind of tree that is known in the world. He also has, where it is possible, the flower, leaf, and seed-vessel of every such tree. It is a most interesting and valuable collection.

When the Arboretum is laid out, the plan embraces a museum there in which all these woods shall be stored.

Presented June 24, 1890.

VIII.

REPORT OF THE COMMITTEE ON MUSIC.

TO THE OVERSEERS OF HARVARD COLLEGE: —

Your Committee has the honor to report —

That they find it to be the feeling of Professor Paine that a new pianoforte is needed for the recitation and examination room in Dane Hall; if a new one be not obtained, it will be well to have the old one thoroughly put in order.

That it is desirable to have bought duplicate copies of the most needed text-books, histories, orchestral scores, &c., to be kept in the recitation room, instead of having them borrowed from the Library as at present. As it is now such books are taken out of possible circulation from the Library, and that is left without some of its most important musical volumes at a time when they are most needed. And that it is to be hoped that a more suitable room may be given to the Department of Music for recitations and examinations. This room should be large enough to seat more of an audience than Sever 11, and yet be of a suitable size for recitations.

In this room small concerts (perhaps of an historical character) could be given under the direction of the Professor of Music at small expense. Such concerts would be a help to the Department of Music, and would undoubtedly add to the interest felt by the students.

The cost of the small library would be from \$200 to \$500.

HENRY L. HIGGINSON,
ROBERT M. MORSE, JR.,
ARTHUR FOOTE.

Presented June 24, 1890.

IX.

REPORT OF THE COMMITTEE ON THE LAWRENCE SCIENTIFIC SCHOOL.

There has been a large increase in the number of students at the School during the past year — the attendance having been 65, against 35 the previous year.

This gain may be due to a larger and more complete curriculum than the School has been hitherto able to offer; to the growing belief that it is to continue to be a separate part of the University; and to still another cause, which cannot be overlooked, namely, the stimulating personal influence of the Dean of the School, whose zeal for its interests has aroused a like enthusiasm among the students.

In view of the present satisfactory progress of the School, your Committee have no recommendations to make, except to reiterate the need of a Mechanical laboratory where instruction can be given in handling tools. A limited number of students are now carried through a course of Manual Training by the Cambridge Manual Training School, but many more applied for permission to take the course than could be accommodated.

A Professorship of Architecture would be a valuable addition to the School and its courses of instruction. A considerable number of persons annually present themselves wishing to take a special course in Architecture and Designing, which the School is unable to supply. Respectfully submitted.

For the Committee :

ABBOTT LAWRENCE, *Chairman.*

Presented September 24, 1890.

X.

REPORT OF THE COMMITTEE ON PHYSICAL TRAINING, ATHLETIC SPORTS, AND SANITARY CONDITION OF ALL BUILDINGS.

The condition of Athletic Sports as they exist at Cambridge to-day can best be learned from a brief statement of what the Athletic Committee has accomplished; and in order better to appreciate the difficulties with which it had to contend at the start, it is necessary to understand the attitude of the great body of undergraduates towards what seemed to them to be unnecessary "Faculty interference." They had felt very keenly the difference between the restrictions which were put upon them and the entire absence of any similar restrictions at Yale, where the Faculty had said to the undergraduates practically this: "We do not propose to assume any control of your athletic sports, or the way in which you conduct them, so long as they do not interfere with the college curriculum. The responsibility is with you." At Yale the undergraduates and graduates combined and years ago brought about a degree of organization which we are but just approaching. At Cambridge, on the other hand, the undergraduates found very few restrictions or regulations for their behavior outside of the class-room except in the matter of their athletic sports, in which one of the most important rules was at one time that they should not play with professionals for fear of contamination. The result was that they felt very little responsibility and regarded the Faculty as the natural enemy of athletics. The whole tone, especially of base-ball and foot-ball, had degenerated.

The Athletic Committee, as at present constituted, has been in existence for three years, and the work of organization has been progressing so rapidly, and the changes have been following each other so quickly, that this Committee has hoped each year to be able to report a permanent and satisfactory settlement of all vexed questions.

The first and most important part of the Athletic Committee's work seems now to have been practically accomplished. Order has been created by the graduate treasurer out of the chaos which existed a few years ago, and it is hoped that further economies will be brought about.

A set of rules has been framed and put in force, so well regulating the eligibility of members of the different teams, and so effective in

doing away with the professionalism which obtained in all the colleges a few years ago, that the athletic authorities of both Yale and Princeton have openly commended them and to a great extent have adopted similar regulations.

Last and most important of all, a spirit of fair play and a more united interest has been revived at Harvard, largely owing to the tactful handling of the Athletic Committee. It is a pleasure to be able to say that Harvard has been among the first, if not the first, to come to a realizing sense of the dangers that threatened all inter-collegiate sport and manfully to set about to correct the abuses in spite of a great deal of odium and unjust criticism. This is progress; these are triumphs which in the opinion of your Committee are of far greater importance than the ability to win every time at any cost, which is only too apt to be the aim at our inter-collegiate contests, only too aptly imitated in our preparatory schools. Unless all our games and contests can be governed by the unwritten rules of fair play and sportsmanlike behavior, the sooner we give them all up the better. There has undoubtedly been a great change for the better and very few appreciate, who have not been in the position to know something of the details, how much of the improvement is due to the indefatigable and disinterested work of the Athletic Committee. They have had many difficult and important decisions to make, and there has been great difference of opinion on many of the questions, but in most cases the opposition has been through lack of information, and it is with the hope of partly obviating this that the suggestion has been made to appoint one member of the Committee from beyond New England.

Your Committee is unanimously of opinion that it is advisable to make such appointment.

Taking well into consideration the good work which has been done by the Committee and the fact that without much doubt it was the best form of a Committee that could have been made at the time, it has now become a serious question whether as at present constituted it is the best permanent form of government for the College athletics.

We quote at length from a report made to the Committee by a member of the Athletic Committee, Mr. William Hooper :

“ I will take as a starting point in my report the date of the formation of the Athletic Committee as at present constituted, namely, October, 1888. I wish also to divide the subject into two parts, and speak on (1) those who indulge in sport as a pleasure and recreation, and (2) those who enter sport for the purpose of playing on one of

the teams. It has been the constant aim of the Committee to offer such inducements as will persuade the students to exercise, and in this it has been fairly successful, but not as much so as it would have been had there been more room, both indoors and out.

There have been more than two hundred men playing foot-ball in the autumn for the last two years, and in the spring about twenty nines, more or less carefully organized, have played base-ball. This number is in addition to those playing on the University and Freshman teams. The number of those playing lawn-tennis is hard to estimate, but I have been assured that one hundred and fifty courts would be used if they could be provided.

Besides these there is, of course, a great number of men who play various games at odd times, which number cannot well be estimated; but it is certainly very gratifying that so many students take some sort of physical exercise in the open air.

Our greatest need at present is more room. This should be happily remedied in the case of outdoor sports when the recent great gift of Mr. Higginson is put into shape for use, but if the students are confined to the Soldier's Field alone it will prove to be inadequate, and steps should be taken to have an area of the Longfellow Field equal to that of the present playgrounds ready for use when Jarvis, Holmes, and Norton Fields are used for other than athletic purposes.

The gymnasium is overcrowded and the need of more room is self-evident. There are now in the building more than thirteen hundred lockers, while twelve years ago there were less than five hundred. The bathing facilities are far from adequate, and the addition of a swimming bath would supply a great need.

The second division of our subject is more serious and more important, as it is from this branch that Harvard's reputation in athletics is made or marred. At the outset it is very important that we should bear in mind that to-day athletics at Cambridge are governed by a very high standard, and that the advance in this respect during the past four years has been most satisfactory. In a report upon athletics submitted by a Committee of the Faculty on June 12, 1888, we read, page 11, 'But it was also apparent that during recent years a strong and in every respect objectionable tendency had developed to break down the line between athletics practised for sport, social recreation, and health, and athletics practised in a competitive spirit, in emulation of professional athletes and players.' In my opinion the Committee could have gone further than this and said that nothing like true sport was possible under the existing conditions. But it is necessary to remember that the 'existing conditions' were not com-

mon to all the sports, and in every consideration of Harvard athletics we should be careful to separate base-ball and foot-ball from the other sports. It is from these that all the odium has come. In the absence of rules regulating the matter there can be no doubt that certain players gave more time to sport than they were justified in doing. The Faculty then interfered and made rules which the students considered to be hostile to their athletics, and matters went from bad to worse with both sides more or less at fault. There were men playing both foot-ball and base-ball who should not have been permitted to play, but there was no rule among the students of the several colleges to prevent it. This should have been prohibited by a rule of the College authorities; but here it was also missing and the evil took firm root. The desire to win had become so keen that everything was subordinated to this one idea and there was no thought of the future. In this respect there has been a great advance; the whole tone of athletics has been raised; the teams are properly composed of *bona fide* students and the play has become clean and fair. I have no hesitation in saying that if any of the methods that were in vogue six or seven years ago should now be attempted they would be frowned upon by a large majority of the men interested in athletics. I feel that the old tone has been in a great measure restored and that, if the students are only careful in their choice of advisers, the system will be safe for many years.

It may seem hazardous, when everything is apparently going well, to criticize the present arrangement; but there is still room for improvement. With the shifting population at Cambridge it is very essential that there should be some permanent and steadying power; and therefore some sort of oversight is necessary. I do not believe that to-day the undergraduates can alone and unaided successfully manage their athletics, and therefore some sort of a Committee is necessary. But it should be as small as possible. The present Committee is composed of nine members. Realizing the difficulty of dealing with expert questions, it has instituted advisory boards of three graduates in each of the four great sports. We have also a graduate treasurer and the Director of the Gymnasium and his assistant, a total of twenty-four men who may be said to have the oversight of Harvard athletics, though it is true at the present time that some of these men fill more than one position. It is no wonder that the newcomer is bewildered and mystified by the complexity which he finds, and I think a great step would be taken in advance could the whole system be simplified. Among the various organizations themselves there is need of consolidation, and I believe athletics would be much better managed were they all united under one head,

and ruled by a governing board to be as small in numbers as possible."

What follows upon "The Sanitary Condition of Buildings" and "Physical Training" was written by Dr. Farnum, and has been accepted by the Committee and is submitted as their report on these subjects, together with recommendations.

THE HEMENWAY GYMNASIUM. — In the basement of this building there are about nine hundred lockers, which are ventilated immediately into the surrounding atmosphere. It is a custom with many of the students to wear their exercising clothes for long periods of time, in some cases through the entire term, without having them washed. These clothes hung in the lockers diffuse through the air of the whole Gymnasium the animal excretions with which they are soaked. It is to be presumed that some of the persons who make use of this building do so with the intention of improving their health. That exercise in an atmosphere polluted with the waste products cast off by human beings is injurious to health can admit of no doubt. The continuance of such a condition of affairs merits prompt and severe condemnation. All the lockers should be removed from the Gymnasium, or, if that is impracticable, they should at least be ventilated by some one of the methods now in use, to insure as far as may be that those in the pursuit of health may not be injured by the very means which they suppose to be conducive to that end. Moreover, frequent washing of the exercising clothes should be enforced. Ampler facilities for bathing are also much needed in the Gymnasium.

Your Committee recommend the adoption of the method of drying clothing now in successful operation at the Boston Athletic Club and believe that this can be done at no great expense to the College by making certain changes in the basement which will make available the space now used for bowling alleys and the base-ball cage. There would also be room for a bath.

MEMORIAL HALL. — The water-closets for the servants are in the basement, just under the dining hall and near the kitchen. They are dark, badly ventilated, and permeated with the odor of the African. The air from them must pass up into the dining hall and out into the culinary departments. Such an arrangement presents no features to recommend it from a sanitary point of view, and if known to those taking their meals in this building would be the reverse of appetizing.

These closets should be removed.

HOLLIS AND STOUGHTON HALLS. — Neither of these buildings have water-closets. The inmates presumably use the water-closets in some other building. In a case of illness exposure in the air, especially at night, might prove injurious; and the alternative, the use of a chamber utensil and the consequent retention of faecal matter for some time in the rooms, is very objectionable. Parts of the cellar floors of these two buildings are bare earth. All cellar floors should be covered with some impermeable covering to prevent the influx of ground air.

These buildings should be provided with proper water-closets and the cellar floors paved or cemented.

Double Windows. — Their use should not be encouraged, for the ventilation of the dormitories is defective enough without them. Some of the rooms so provided have been visited by a member of the Committee in the morning before the occupants were up, and their stench was almost unbearable by anyone coming from the outer air.

Water-closets seem to have been put in the cellars almost invariably, the worst situation in the building from a sanitary point of view, for when it is heated by the various fires in the rooms, which are used the greater part of the college year, it becomes like a heated shaft causing an upward draught, which of course carries through the building all gases and volatile matters entering the lower parts.

Handsomere halls than Holworthy have of late years been built, but so far as ventilation is concerned no advance has been made — rather the opposite.

The care taken of the buildings seems on the whole to be satisfactory; the only time when an undue amount of rubbish was found in the cellars was at the end of the term. It might be well to have the buildings inspected by some one familiar with sanitary subjects at irregular intervals. If the inspection was made at regular intervals, the janitor would soon find out when to expect it and everything would probably be found in good condition.

PHYSICAL TRAINING. — If by this expression the development of the muscular system is intended, this Committee has nothing to suggest that is not more appropriately considered under the head of Athletic Sports. The object of training for an athletic contest is to fit the athlete to make the greatest skilled muscular effort of which he is capable in a certain way for a certain time. It may be conducive to health, but that is not its primary object.

Physical training, in a broad sense of the term, requires a knowledge of all means that improve and maintain health and of every

influence injurious to it. There is a negative as well as a positive side, the preservation of health frequently depending more upon what is left undone than upon what is done. Such an understanding of the subject, which in the opinion of your Committee is the true one, makes it of too great extent to be dealt with in a report such as this. Some aspects of it may, however, be briefly considered. Muscular exercise at the present time absorbs a good deal of attention. It is an important part of physical training, but not the most important. Admitting once for all that a moderate amount of exercise in the open air is beneficial to health, the following remarks will relate to exercise taken within doors, as in a gymnasium. To obtain information on this point your Committee propounded the following questions, which were most courteously answered by Dr. Sargent, Director of the Gymnasium.

Question 1. What proportion of those who have undergone a physical examination present themselves for a subsequent examination?

Answer 1. Fifty per cent.

Question 2. What is the usual interval between the two examinations?

Answer 2. Five months.

Question 3. What proportion follow out the "special order of appropriate exercises" made out for them after the first examination?

Answer 3. Not known.

Question 4. What proportion of those presenting themselves for a second examination show improvement?

Answer 4. All.

Question 5. What are the means for determining the effects of gymnastic exercise on health?

Answer 5. Mainly the increased muscular development.

If muscular development and health are synonymous terms then exercise, in the Gymnasium at any rate, appears to be a measure of the greatest value. Before this conclusion is accepted, however, it would be well for us to know the value of muscular development as an indication of health, and how that value is to be expressed. Measurements of the external parts of the body, and testing by various apparatus the contractile power of individual muscles and groups of muscles, have, owing to the numerical form used to express the results obtained, great attractions. But it must not be forgotten that health depends more on soundness of the internal organs than on the external muscular development. At present your Committee is not prepared to accept increased muscular development as a conclusive evidence of improved health, but so far as muscular development is concerned the system now employed at the Gymnasium has

our approval. We are also of the opinion that the methods of physical examination, in use there, are of no value as an indication of the health of the person examined. However this may be, there can be no doubt that the building in which exercise is taken should not present any condition injurious to the health of those using it. We are of the opinion that such a condition does exist in the Gymnasium, and would refer to the remarks made upon that building. Even leaving this out of consideration, it is doubtful if any apartment used by a large number of persons at the same time can be satisfactorily ventilated by natural means: "in temperate climates in certain buildings where sudden assemblages of people take place, mechanical ventilation must be used." (Dr. E. A. Parkes.)

Before a course of exercise is laid out for anyone, a thorough physical examination must be made by a person practically familiar with the signs and symptoms of both healthy and diseased conditions of the organism. And something more than this is needed. An expert may detect the evidence of existing disease, but in many cases physical training is of the greatest importance before disease has reached the stage when it can be detected. Here the knowledge of the family physician is invaluable and no amount of acuteness in physical examination will ever be able to take its place.

Take one illustration, that of Phthisis. This disease is estimated to be the cause of about one seventh of the total deaths of mankind. Out of 756,893 deaths in the United States in 1880, Phthisis was given as the cause of 91,270 (10th census of the United States). From the same authority it also appears that in every thousand deaths in the male sex from this disease 131 occurred between the ages of 20 and 25 years.

In proportion as men engage in indoor pursuits so does their death-rate from Phthisis increase. When a phthisical family-history is known to exist, it is imperative that the exercise should be taken in the open air at all seasons. The value of this statement is evident in the case of a student whose time is mainly passed within doors in a sedentary pursuit and frequently in an atmosphere vitiated by the respiration of many persons.

The persons whose physical training is under consideration have passed through most of the dangers specially incident to childhood, though few have reached the full development of manhood. They are at a period of life when the general mortality is at its lowest point, but when there is great danger of the acquisition of habits injurious to themselves and sources of degeneration and disease to their descendants. Chastity and temperance in the use of alcoholic liquors are of the utmost importance for the formation and maintain-

ance of a sound bodily organization. While there is no good reason for thinking that students as a class are more addicted to evil courses than an equal number of men of the same ages in other pursuits, it is well to bear in mind that if, as has been advanced in some quarters, the race is degenerating, a large amount of that degeneration may with fairness be laid to alcoholism and syphilis. It is necessarily difficult to form an estimate of the amount of these two influences, but it is undoubtedly vast. "I estimated that in 1873, out of a population of 942,292 persons, 50,450 were suffering from syphilis in New York City. I believe this number to be under rather than over the true amount. This represents only the civil population. Syphilis is essentially a chronic disease, is liable to attack every tissue in the body, and its later manifestations often appear so long after the early symptoms as to cause its connection with many diseases to be overlooked. Thus, grave and deep-seated affections of the eye, serious lesions of the nervous system, and many maladies of the viscera depend upon this disease as their origin,—and yet are overlooked, either because the earlier syphilitic symptoms have escaped notice, or because the patient has been ignorant of their connection with syphilis. And yet these same diseases may be sufficient to incapacitate men from work, to blast their lives, and make them dependent upon the charity of friends or strangers without offering them the miserable gratification of release by death." (Dr. F. R. Sturgis.) "It is strange and sad to remember that this malady, rivalled in its total capacity for wrecking happiness and health and life by no other, is equally formidable by reason of our limited power over it. Make what deductions you can for the mild or latent forms of the disease, recognize all our power of repression, and the fact remains that we have yet to find the means of arresting it, and, I may add, we have yet to find effective means for its prevention. One method, and one alone, is possible, is sure, and that one is open to all. It is the prevention and the safety that can be secured by unbroken chastity." (Dr. W. R. Gowers.) By many persons Gonorrhoea is regarded as an affection of trivial nature and worth little consideration. But some physicians who have had a large experience with its treatment do not think so, for its many and frequent and serious complications, and the grave organic lesions of which it may be the starting point, can entail on its victims an amount of misery but slightly inferior to that occasioned by Syphilis itself.

And now one glance at the companion picture: "The effects of intemperance are best exhibited by the mortality figures of innkeepers, including publicans and generally all dealers in the liquor trade, and of brewers. The mortality directly ascribed to alcoholism is, how-

ever, a very imperfect measure of the intemperance prevailing, for there can be no doubt that the desire to spare the feelings of surviving relatives practically limits the statement of this cause of disease to those cases where no disguise is possible. A better measure is the mortality from diseases of those organs which are known to be seriously affected by alcoholic excess, and which can be stated in certificates of deaths to have been diseased without fear of offence." (Supplement to the 45th Annual Report of the Registrar General, London, 1885.) On this basis it appears that among persons having free access to liquor, the mortality — as compared with persons not so situated — is increased enormously in the following affections: Alcoholism, Liver Disease, Gout, Disease of the Nervous System, Suicide, Accident.

Youth thinks that age exaggerates dangers, especially in cases where the penalty does not follow immediately the infringement of the law. Some of us may yet remember what our ideas were about such matters. Every influence that elevates the moral tone will conduce to better health. The true physical training of the race is a mighty problem, not insoluble, we trust, by the efforts of those whose hearts are in the work.

We recommend the appointment of an officer whose duties shall be as follows:—

He shall have access to the record of the physical examination of the students. He shall keep such an account of the family-history as would be of value regarding any advice to be given on the preservation and improvement of health. A blank form shall be prepared of this account, to be filled in by the parent, or other person standing in loco parentis. It shall be held as a confidential communication and shall not be open to inspection by any person other than the officer. He shall also keep a record of absences from college duties due to illness, but not the nature of the illness.

This officer must be a doctor of medicine; but he shall not, while holding this position, engage in the practice of his profession, nor shall he have any occupation that would in any way interfere with the discharge of the duties of his position. He shall from time to time give some brief lectures on sanitary matters, if such a proceeding shall be thought to serve any useful purpose.

The students shall be entitled to consult him during certain stated hours on hygienic subjects, but he shall in no case attend any student in any illness, whatever its nature may be.

He shall have supervision of the sanitary condition of all the buildings, and shall perform such other duties as would properly come within

the province of a medical officer of health. He shall from time to time make to the proper authorities reports on such matters as he shall think deserving of their attention.

ROBERT BACON,
AUGUSTUS HEMENWAY,
CHARLES F. ADAMS, 2d,
GEORGE W. WELD,
ROBERT F. CLARK,
EDWIN FARNHAM,
MAURICE H. RICHARDSON,
WILLIAM HOOPER.

Presented January 13, 1892.

XI.

REPORT OF THE COMMITTEE ON GOVERNMENT.

June 23, 1890.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

GENTLEMEN, — The Committee on Government submits the following report for the year 1889-90: —

Your Committee believes that the changes introduced into the discipline of Harvard College at the instance of the Board of Overseers have done much good. Several members of the Committee have visited Cambridge, have examined the method of carrying out the new regulations, and have made inquiry into their practical workings. It is not to be expected that this method can be perfected in a year, but a great improvement in the discipline of the College is already reached. The reports of attendance at the several recitations and lectures, now usually made by monitors, are prompt and regular, whereas under the old system they were often delayed. There is good reason to believe that these reports are fairly accurate, and a greater degree of accuracy is hoped for and expected next year; while under the old system the reports were sometimes practically valueless. A continuous residence in Cambridge on the part of the students, so important in every respect, has been generally secured.

When the proposed regulations were under discussion a fear was expressed that the enforcement of stricter discipline would greatly annoy many of the best students. In fact, however, regular and punctual habits have been taught and encouraged without serious inconvenience to anyone. We believe that the moral training of its students is entirely within the province of the College. We believe that the College would gravely fail in its duty if it did not secure this training by every means in its power. However well adapted may be the system of the Continental universities to the circumstances in which they are placed, we believe that American opinion demands for American graduates training both intellectual and moral, rather than a mere opportunity to acquire learning. We rejoice, therefore, that the authorities of the College have devoted themselves to this training with renewed and increased energy.

In the enforcement of discipline, much always depends upon the officer who administers it. The Assistant Secretary, Mr. Montague Chamberlain, whose duty it is to deal with most petty offences, seems

to your Committee well qualified for this task, fair-minded and discriminating. The appointment of advisers to the freshmen is an experiment tried this year for the first time. It is a step in the right direction, and, as the advisers become more familiar with their duties, its advantages will be felt more strongly. These advisers should be appointed as early as possible in order that the students may consult them, if they so desire, before coming to Cambridge in the autumn. We hope that in time a similar supervision may be extended to the upper classes.

Harvard College pays every year in scholarships and to beneficiaries over \$46,000. This is exclusive of all prizes, of nearly \$11,000 paid in fellowships, and of a certain additional sum paid to undergraduates for services rendered. It is necessary for the applicant to declare his pressing poverty as a condition of obtaining any part of this aid. A considerable proficiency in study is also required, but popular opinion both within and without the College regards a scholarship rather as a badge of respectable mendicancy than as the prize of brilliant achievement. Formerly the College concealed the names of those who held scholarships as if the possession of one were a thing to be ashamed of; in late years these names have been published, a change in every way to be commended. Something more should be done, however, and your Committee recommends that a few of these scholarships be thrown open to competition irrespective of the poverty of the candidate. If this is done, even though poverty be still a necessary qualification for most scholarships, yet the honor which will attach to some will be reflected on them all.

Again, there are always young men who can get through College without pecuniary aid, though it is very inconvenient for them to do so. Such men apply or fail to apply for scholarships according to the temper of their minds rather than according to the length of their purses. We do not mean to say that any of the present holders of scholarships are undeserving, — we believe that scholarships are now fairly sought and fairly awarded, — but it is clear that open scholarships will give an opportunity both to poor students and to poor parents who would be the better for help but who now feel that they can struggle along without it.

Finally, open scholarships will act as an incentive to some students who do not need the money. In America, especially, there is danger in intimating to the sons of rich men that they ought not to contend for the prizes of life with the sons of the poor. To reinforce natural idleness by an appeal to generosity and to the conscience is highly undesirable. To say that young men ought to study for the love of learning, and for that alone, is to divorce the love of duty and the

desire for honorable reward, — two things inseparably joined in human nature.

It is true that very few scholarships can, under the terms of the gift, be opened to general competition. There are a few, however, which are unrestricted, — quite enough for the purpose of an experiment.

In an appendix to this report is given a list of scholarships which may thus be thrown open to competition. Their combined annual value does not exceed six per cent of the total amount paid to beneficiaries and will not appreciably diminish the amount now received by poor and deserving young men, for experience shows that at least half of the open scholarships will be won by holders of scholarships under the present system. We are firmly of opinion that the payment of three or four per cent of the beneficiary fund to students not impetunious will increase the self-respect of all who receive aid and will stimulate study throughout the College.

The Committee had intended to make special investigation into the character and needs of the special students in the College, hoping that some means might be found of bringing these very undesirable exceptions within the ordinary rules of the College. But the proposals to modify the whole plan of academic instruction now before the Board of Overseers are so far-reaching that we have thought best to postpone the inquiry. If the class system is to be remodelled, we earnestly hope that the number of these men, often mere camp-followers of the College, may be considerably reduced.

We recommend the passage of the following vote :

Voted, That in the opinion of the Board of Overseers some scholarships in the College should be opened to general competition without regard to the pecuniary circumstances of the applicants.

For the Committee,

FRANCIS C. LOWELL, *Chairman*.

Presented June 24, 1890.

APPENDIX.

Three Bassett scholarships of \$90 each, entirely free, except that one of the holders must be a senior, one a junior, and one a sophomore.

One Gorham Thomas scholarship of \$200, entirely free.

One Toppan scholarship of \$300, entirely free.

One Savage scholarship of \$300, entirely free.

One Derby scholarship of \$250, free, except that it may be claimed by Arthur Derby Draper, born 1874.

One scholarship on the Morey foundation of \$300, free, except that descendants of Rev. George Morey are entitled to preference.

One Slude scholarship of \$250. In this case the income is to be "used for the benefit of young men who have proved themselves worthy of aid by diligence and meritorious conduct during at least one year's residence at Harvard." In the opinion of the Committee this scholarship may be opened to competition, unless claimed by a son of the benefactor.

The Farrar scholarship of \$200. In this case the income and interest is to be applied "toward the maintenance and support of one meritorious student." In the opinion of the Committee this scholarship may be opened to general competition.

Two Pennoyer scholarships of \$100 and \$90 respectively. Here the scholars are to be educated, brought up and maintained in the College called Cambridge. These scholarships also are probably available.

The Merrick scholarship, the scholarship of the Class of 1814, and the scholarship of the Class of 1841 are free, except that descendants of members of the Classes of 1870, 1814, and 1841 have the preference as applicants. It is probable that this condition will prevent the opening of these scholarships to competition.

XII.

REPORT ON THE DIVINITY SCHOOL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

GENTLEMAN, — The Committee to visit the Divinity School beg leave to offer the following report: —

The first thing to be said about the Divinity School is that it is manifestly taking its place as the most desirable seminary in the country for advanced courses in the various departments of sacred literature and clerical education. Of thirty-five students in the last year's Catalogue no less than ten were graduates of other theological schools, and thus already preachers, some of them ordained ministers. In the forthcoming Catalogue of the present academic year will appear the names of eighteen graduates of other schools, three of them in the regular classes and fifteen enrolled as graduate students.

We find every reason to be satisfied with the non-sectarian attitude of the School; but we are solicitous that it should not be regarded as in any sense an attitude of indifference or of compromise. The several professors do not mask their own beliefs; but in expressing them they feel bound to give a fair and full exposition of both sides of every important question, while from either side they rigidly eliminate personal influence, party preferences, and the *odium theologicum*, so that the student is left as far as possible to his own unbiased judgment. The only deficiency in this method — and that one which can be and ought to be supplied — is that the students fail to obtain instruction concerning existing sects, their position with reference to dogmas and forms, the drift of thought within their respective ranks, in fine, the religious geography of the community. This, indeed, is not scientific knowledge; but it holds no secondary place among the young minister's needs, especially as in our time sects lack stability of opinion and practice, and their formal creeds and constitutions do not sufficiently define their present position.

In the Old Testament, its language, literature, and history, and in allied branches of Semitic study, Professors Toy and Lyon are unsurpassed, if not unequalled, not only in their full equipment for their work, but equally in teaching power. They are giving new attraction to a department which has been losing its hold on the interest of the clerical profession, but which can be neglected or slighted by none who would be conversant with the birth and early history of Christianity or with the interpretation of the Christian Scriptures. The

Hebrew language is so taught here as to render it hardly needful, were it desirable, to make it a required study. Few students will willingly dispense with it, and we doubt whether any will fail to avail themselves of the historical courses of kindred value which the same professors offer.

In the New Testament, Professor Thayer has like preëminence as a critical scholar. In the minute, thorough criticism of the New Testament his exercises are precisely adapted to the taste and need of such biblical scholars as the Christian Church ought to crave and to demand. This painstaking analysis of a portion of the sacred text is the best possible training for one who desires to become a skilled expositor of the Christian Scriptures. Your Committee would inquire whether, in addition to this course which they would not have less thorough, there might not be a course in which, with less attention to verbal and grammatical niceties, a larger portion of the New Testament should be read in the original Greek. With this exception, if it be one, the entire range of Professor Thayer's courses covers all the ground that properly belongs to his department, and implies on his part so much labor of the highest type, that it is only with extreme hesitation that we suggest any added burden.

Professor Everett's courses on the Comparative History of Religion and on Systematic Theology, and his entire work and influence in the administration of the School, would claim for him like preëminence with that accorded to the professors already named, were it not that his department invites and includes a much larger number than theirs of men of kindred spirit, aim, learning, and ability.

It is our misfortune that Professor Peabody cannot be duplicated; but so onerous is his College charge that he can give himself only in part to the Divinity School. That part, however, is of great significance and worth. With the valuable aid of Rev. Edward Hale, he criticizes the sermons of the students, not only in their composition, but in their delivery as they are read before him in Appleton Chapel. He also gives such instruction as none can better give as to Pastoral Care and the Conduct of Christian Worship. His elective on the Practical Ethics of Social Reform, open to the entire University, is taken by many Divinity students, but of necessity it must be of general rather than special adaptation; and it might be desirable that there should be a course of lectures on the relation of the clerical profession to social reforms, — a matter in which young ministers in their frequent practical blunders show peculiar need of warning, instruction, and guidance.

In Church History, during Professor Emerton's absence, the students have enjoyed the services of Professor Allen of the Episcopal

Divinity School, who has in our School, as in his own, fully vindicated his title to a foremost place in his department.

In Elocution, Mr. Kirby's services have been skilled, assiduous, and efficient. For the present academic year Professor Churchill of Andover has been secured as a teacher, and his ability and reputation as an elocutionist and his long and eminently successful experience in training candidates for the pulpit give ample assurance that his instruction will be of signal and enduring value to the members of the School.

In the absence of any scientific course of Ethics in the programme for the Divinity School, your Committee would suggest the expediency of making Professor Palmer's course on Systematic Ethics one of the regular electives. If this be not done, it is recommended that the students be urgently advised to attend that course as an extra; for next to the New Testament your Committee regard Ethics as the most important department of study for the Christian ministry.

As regards the Library, your Committee cannot overestimate the worth of Rev. Mr. Morison's services as Librarian, and under his direction the work of cataloguing is in rapid progress, so that in this one particular the School will have the full benefit of a working library. But there is in the building little room for growth, and there is great need of a reading-room, especially as an entire class may often be using the same set of reference-books. The recitation-rooms in the building are inadequate to the requirements of the School and there are courses of instruction given elsewhere, which would more fitly belong within its premises were there room for them.

All which is respectfully submitted.

A. P. PEABODY, *Chairman.*

Presented December 17, 1890.

XIII.

REPORT OF THE COMMITTEE ON SEMITIC LANGUAGES.

The Chairman of the Committee on the Semitic Languages begs leave in his own name to report the action of the Committee.

On the 3d of December, 1889, the Committee held their first meeting, and invited Professors Toy and Lyon to confer with them as to the condition and needs of the department. The Professors regarded a collection of objects illustrative of the ground covered by their instruction as specially desirable. It was accordingly determined to take measures for the establishment of a Semitic Museum. It was estimated that not less than \$10,000 would be required for the hopeful initiation of such an enterprise. Mr. Jacob H. Schiff, a member of the Committee, offered at once to subscribe half that sum, and by letter shortly afterward doubled his subscription, thus placing the entire sum desired at the command of the department. His only condition was that the University should provide for the exhibition and protection of the objects to be purchased. For this purpose the Trustees of the Peabody Museum, at the instance of Professor Putnam, offered the temporary use of one of the galleries in the recent addition to the Museum.

At a subsequent meeting of the Committee it was agreed that it was desirable that one of the professors should visit Europe during the summer vacation to make in part the requisite purchases, and to establish such connections as might render further purchases practicable by correspondence. Mr. Stephen Salisbury, of the Committee, furnished the funds necessary for this purpose, and Dr. Lyon undertook the service.

At the third meeting of the Committee, on the 3d of the present month, Dr. Lyon presented a report of his doings, of which the following synopsis is here given : —

The first purchase for the Semitic Museum — March, 1890 — was a collection of Syriac manuscripts and Cufic coins which the Rev. Dr. J. H. Shedd had brought from Oroomia. One of the manuscripts was a lectionary of the Gospels from the year 1207. Another manuscript belonging to this collection, the so-called Gezza, from the year 1666, was purchased and presented to the Semitic Museum by Mrs. Emily A. Burleigh of Cambridge. The missionaries at Oroomia are favorably situated for securing manuscripts of the ancient Syriac

literature and it is hoped that we shall receive by this channel many originals or copies.

The second purchase — March, 1890 — was a collection of Babylonian antiquities which had been sent over from London, embracing written tablets and fragments, seals and gems. In April, the Semitic Museum received from Mr. Schiff the gift of J. Reuchlin's treatise on the Rudiments of Hebrew, 1506, and a Hebrew Bible in three volumes with interlinear Latin translation. In May, Mr. E. S. Dixwell of Cambridge presented the entire set of the Journal of the American Oriental Society.

In London Professor Lyon had the benefit of Mr. Schiff's presence and counsel, and during the whole summer he had frequent occasion to seek that counsel by correspondence. Most of the summer was spent in London, ten days each being given to Paris and Berlin in July.

The first work in all these places was to learn what monuments were in the museums and which had been or might be reproduced in plaster. The museum authorities were uniformly kind and obliging, and special thanks are due to Messrs. Pinches and Budge of the British Museum, M. Léon Heuzey of the Louvre, and Professor A. Erman of the Berlin Museum.

The most striking Semitic monuments in London are the Assyrian bas-reliefs recovered from the ruins by Sir Henry Layard, George Smith, and Hormuzd Rassam. Many of these were molded years ago and casts of such are to be had. Many of the best, however, have never been molded, and there is now a regulation of the British Museum restricting very much the process of making new molds. In this state of affairs not all could be had which was desired, but a good selection was made, principally of the bas-reliefs of Assurnazirpal, 884–860 B.C., and most of these have arrived. Casts of such clay tablets as have been molded were likewise ordered, as well as the impressions of one hundred of the best Babylonian-Assyrian seals. Photographs may be taken of all objects and an estimate was given by a photographer for taking about fifty of the best bas-reliefs. Inasmuch as the chief cost is for the negatives, it is suggested that by coöperation of other institutions the proportionate cost may be much reduced.

The second order in London, given in August, included all the Arabic, Hebrew, and Phœnician objects in the British Museum of which molds exist, and also the closely related inscriptions and reliefs from Persia. Several small Hittite inscriptions were included in the first order. A copy of a Hittite lion, the size of a large dog, was presented to us by F. D. Mocatta, Esq., who placed us under obligation by other acts of kindness. From the East India House we get a copy of the great Nebuchadnezzar inscription. Four inscribed Babylonian building bricks were also purchased from private hands.

At an auction on July 4th a dozen cuneiform tablets from Babylon were purchased. One of these is a legal decision of the time of the Jewish exile. A second is the record of the sale of real estate, and is a perfectly preserved case tablet covered with a duplicate account and seal impressions.

Rev. Dr. Adler, Chief Rabbi in London, showed much kind interest in the Semitic Museum and gave to Professor Lyon useful suggestions and cards of introduction.

Among the pleasures of the summer were opportunities of interviews with the great explorers and decipherers, Sir Henry Layard, Sir Henry Rawlinson, and Hormuzd Rassam, Esq. These gentlemen view our undertaking with warm approval and made valuable suggestions.

The establishment of connections with the Orient is very desirable, and special attention was directed to this end during the summer. Conversations were held with several persons living in the East, but no definite arrangements were entered into.

At Paris the Louvre has of late years been greatly enriched by the diggings of M. de Sarzec at Telloh in Chaldea, and of M. Dieulafoy at Susa in ancient Persia. The Telloh monuments are among the finest yet found and can hardly be later than 2500 B.C. We shall have casts of several of these statues, so wonderfully chiseled and covered with inscriptions. From the palace of Darius we are to have casts of two archers in colored tiles. There will also be casts of many other objects, Assyrian, Babylonian, Phoenician, Arabic, Hebrew, and Moabite, the celebrated Mesha stone being among the last-named, giving an account of the wars of Moab and Israel in the 9th century B.C.

M. Léon Heuzey, Director of the Louvre, was most obliging and considerate, granting casts of many objects never molded before. In such cases, however, there is a condition that the purchaser of the cast shall also bear the expense of making the mold. There are in the Louvre other objects of which casts ought to have a place in the Semitic Museum, but they were not applied for because they are too high for the room which we have for exhibition purposes. From Mainz a few casts were ordered of small Babylonian objects the originals of which are in the Louvre. To the Bibliothèque Nationale we are indebted for a copy of the famous Boundary stone from Babylon, containing a long inscription and known as the *Caillou de Michaux*. Its date is about 1100 B.C.

The Berlin Museum has been likewise enriched of late, both by excavation in the Orient and by purchase. By purchase the el Amarna cuneiform tablets were acquired. These were written to Egyptian pharaohs about 1500 B.C. and were found in Egypt in 1887. Excavation has yielded some fine Hittite reliefs and a magnificent monument of Esarhaddon, king of Assyria, 681-668 B.C. Many of the new acquisitions may not yet be molded, because some questions are still pending relating to the ownership. The Esarhaddon monument ought to be ordered so soon as it may be had, although it is too high for our present room.

On one condition it is possible to obtain casts of these objects, viz., that they shall not be exhibited nor their contents published in anticipation of the publication planned by the Berlin Museum. A long Aramaic inscription of the 8th century B.C., and a monument of Sargon (722-705 B.C.) coming from the island of Cyprus, are among the chief objects of interest ordered in Berlin.

The report records meeting in Berlin gentlemen who have traveled extensively in the East, and of having correspondence in regard to the possible purchase of Arabic stones and Hebrew books. From Leiden were ordered casts of several Phoenician inscriptions.

On Professor Lyon's return to London in August, Mr. Isidore Spielman, Honorary Secretary to the Anglo-Jewish Exhibition in 1887, was helpful in various ways and presented to the Semitic Museum the catalogue and three other volumes relating to the exhibition.

Two small collections of Hebrew and Arabic manuscripts were purchased, in connection with which the Rev. Dr. Ginsburg and Dr. Heinrich Hoerning cheerfully rendered most valuable assistance.

About eight hundred photographs were bought representing Semitic scenery, ruins, buildings, and costumes in Palestine, Syria, Arabia, Egypt, and Spain.

With the consent of the Trustees of the Palestine Exploration Fund, Mr. W. F. Petrie, whose diggings at Lachish were so successful last winter, presented to us casts of squeezes of two of the most interesting objects found in the diggings. Mr. Petrie's success at Lachish illustrates how fruitful a field for archaeology Palestine may yet become.

F. W. Madden, Esq., of Brighton, the great authority on Jewish coins, has sent us some casts of coins. The British Museum has perhaps a thousand coins of which we should have electroplated copies. To Dr. Poole, the Keeper, and to Drs. Head and Grueber, the Assistant Keepers, the report acknowledges indebtedness for valuable suggestions. We have from Mr. Robert N. Toppan of Cambridge the promise of a Jewish shekel and half-shekel.

Several other objects have also been received at home by gift or by purchase. Rev. Dr. Thomas Laurie of Providence has given us a Syriac manuscript of the Psalms and several small Arabic works. Mr. I. N. P. Stokes of the College has made a gift of \$25. From the University of Pennsylvania we have purchased a cast of the Greek inscription from the Temple of Herod. From the same source we shall receive copies of one hundred Babylonian-Assyrian cylinder seals.

From Palestine much may be had illustrative of Semitic life and history, while the purchase of manuscripts will be a perennial source of enrichment of the Museum. It is also hoped that independent explorations may be undertaken.

The cases are now being made for the Semitic room in the Peabody Museum, and they are promised by Christmas. It seems, therefore, probable that early in the new year we shall be able to place what we have received on exhibition.

The amount already expended is nearly half of Mr. Schiff's donation. Other valuable objects are attainable, and some are contracted for, which cannot be placed on exhibition at present for lack of room, the space now available being but sixty-one feet square and the ceiling being too low for some of the larger casts.

The growth of the Semitic department is among the striking phenomena in the recent history of the University. It consisted, a short

time ago, of half a score of divinity students who reluctantly took a few elementary lessons in Hebrew, in accordance with a tradition fast dying out that a minister ought to know something of the languages in which the Scriptures were written. Now there are sixty-five students in the department, and they weigh much more than they number, a large proportion of them being among the foremost men in the College and in the graduate classes. The change is due undoubtedly, in part, to the interest awakened by explorations on Semitic ground, but in chief part, to the unsurpassed learning, ability, and teaching power of Professors Toy and Lyon, who know how to connect faithful instruction in the rudiments of an unfamiliar language with whatever can give that language an important place in philology, archaeology, and history. Four prizes have been offered in this department for the current year, and it is believed that, while more advanced study may be its own sufficient reward, such prizes will have a stimulating influence on beginners, especially in the elementary Hebrew course. A resident or travelling fellowship, assigned to this department exclusively, would be of peculiar value as affording the means of replenishing advanced scholarship, and thus training men who shall render good service as teachers or shall perform original work of a kind which, even though of inestimable worth, can command no pecuniary recompense.

The courses of the last year were two in Hebrew, two in Aramaic, two in Assyrian, two in Arabic, one in Æthiopic, and one in General Semitic Grammar for those already acquainted with at least three Semitic languages. There have also been courses in Babylonian-Assyrian History, the History of Israel, the History of the Hebrew Religion, and the History of the Spanish Califate, — two of them full courses and the other two half-courses. The undergraduates have access also to Professor Toy's lectures, constituting an Introduction to the Old Testament, specially designed for the Divinity students.

Lectures open to a larger public are a part of the plan of the department. During the last academic year Professor Toy delivered a course on Semitic Contributions to Civilization, and Professor Lyon, one on Cuneiform Inscriptions and the Old Testament.

The Semitic Seminary, or Conference, as it is now called, is a voluntary association of students present and past in the department and other Cambridge gentlemen interested in it. The meetings are held twice a month, for the presentation of the results of individual study and research and for the discussion of subjects belonging to advanced Semitic scholarship.

It will be seen from this summary that the Semitic work holds a

prominent place in our University programme. There is no department which has more accomplished teachers, more zealous students, or a more thoroughly organized system of instruction. But the arrangements for its accommodation are adapted to its condition twenty years ago, and not to its present requirements. It has virtually no room at its command. Some of the exercises are held in the Divinity Library, in which the limited number of apartments precludes a free choice of hours. The only other room that can be occupied by the department — and that not exclusively its own — is one in Sever Hall, adjacent to the lecture-room and used as an ante-room to it, so that none of the apparatus of instruction can be kept there. Even more than lecture-rooms of its own, the department needs a library with suitable accommodations for study. The books used in some of the courses are costly, some of them rare, and if one student keeps such a book in his room, his fellow-students may be in urgent need of it without being able to get access to it. In a working library the students might not only have free use of needed books, but opportunities which would often occur for joint study and research and for mutual aid. Mr. Schiff has offered funds for the purchase of such books as might be desirable at the outset for such a library, if a proper room can be assigned for the purpose.

When it is considered that the funds in hand for the Museum cannot be put fully to use, while opportunities for the purchase of valuable objects may be lost by delay, may it not be hoped that measures will be promptly taken for at least a temporary supply of the desired room? What is needed and is fairly due to a department which can lose none of its interest or importance by the lapse of years, is a building appropriate to its uses, with a hall for the Museum, a library that shall also be a study and reading room for the members of the classes, and two or more commodious lecture-rooms.

All which is respectfully submitted.

A. P. PEABODY,
Chairman of the Committee.

Presented December 17, 1890.

XIV.

REPORT OF THE COMMITTEE ON THE BOTANIC GARDEN.

December 19, 1890.

TO THE BOARD OF OVERSEERS:—

GENTLEMEN, — No changes of importance are noted in the arrangement of plants in the houses or in the beds, except so far as these have followed a carrying out of the recommendations of the Committee last year.

The number of species under cultivation has been diminished, and the plants are now available better than ever before for the large classes in Botany. The Committee note that a large part of the material used by the elementary class is raised at the greenhouses of the Bussey Institution. The arrangement by which this is secured appears to be advantageous for the College and for the Bussey Institution.

The beautiful set of glass models is being continued by the artists in Germany.

Extensive repairs have been necessary in the houses occupied by Mrs. Gray and by the Head Gardener.

The Museum and laboratories are nearly completed. Owing to the excellent judgment of Mr. Agassiz in making contracts, the estimates have not been exceeded.

Professor Goodale called the attention of the Committee to the absolute necessity for providing for the Herbarium by securing an assistant for Mr. Watson. The income of the Herbarium is not sufficient to pay for even its ordinary running expenses, and this makes it impossible to carry on the work to advantage. Mr. Watson has made a statement to the Committee, by which it appears that the sum of \$4000 annually should be added to the present income. Your Committee recommend that this sum be raised for a short term, say of five years, and meanwhile an attempt may be made to secure a foundation worthy of the reputation of the organizer of the Herbarium, Professor Asa Gray. Of the sum above referred to, there has been already subscribed the amount of \$3550 for five years, and \$250 for one year.

Professor Allen and Mr. Kidder have made it clear to the Committee that if the department of Systematic Botany at Harvard is to retain its present position in our country, a strenuous effort must be

made to relieve Mr. Watson from a part of his routine work, and leave him free to carry on the work begun and prosecuted by Professor Gray, namely the Synoptical Flora of North America. The Library of the Herbarium can also be provided for from the sum spoken of by Mr. Watson, and the efficiency of the establishment increased in every way.

Professor Goodale left in September for a voyage round the world, a refreshment very much needed by him.

For the Committee,

HENRY LEE, *Chairman.*

Presented March 25, 1891.

XV.

REPORT ON THE JEFFERSON PHYSICAL
LABORATORY.

May 6, 1891.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

GENTLEMEN,—As members of the Committee appointed to visit the Jefferson Physical Laboratory, we are pleased to attest our satisfaction with the conduct of the Laboratory during the current academic year. The zealous labors of the Director and his associates have covered an extended series of original investigations, in addition to the routine work of class instruction.

The fruit already borne by a recent small endowment, strongly confirms our belief that a suitable income would at once place the Jefferson Physical Laboratory in the front rank as a centre of physical research.

FRANCIS BLAKE,
T. JEFFERSON COOLIDGE,
W. H. FORBES,
A. LAWRENCE ROTCH.

Presented May 27, 1891.

XVI.

REPORT OF THE COMMITTEE ON MUSIC.

June 1, 1891.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE : —

GENTLEMEN, — The Committee appointed to visit the department of Music has the honor to report this :

That it is desirable to give the classes a different recitation-room, if possible, and one in a quieter place, free from the noises of Harvard Square. Your Committee makes this suggestion just now especially, because it is understood that the old Law School building is to be remodelled.

H. L. HIGGINSON,
JOHN FISKE,
ARTHUR FOOTE.

Presented June 10, 1891.

XVII.

REPORT OF THE COMMITTEE TO VISIT THE VETERINARY SCHOOL.

21 October 1891.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

GENTLEMEN, — The Committee appointed to visit the Veterinary School for the year 1891 respectfully reports as follows: —

The last two reports of the Visiting Committees of the School, namely, the report made by Dr. Hodges in 1889 and the report made by Col. Russell in 1890, agree in the statement that the prosperity of the School is limited and in danger from lack of suitable financial support. As is very succinctly and forcibly stated in the report of Dr. Hodges in 1889, the University is engaged in an attempt to carry on almost entirely with its own earnings a high-grade school requiring a residence of three years of nine months each in direct competition with schools of low grade requiring only a residence of two years of four or five months each.

That the School needs greater financial support seems to the Committee of the present year to be beyond dispute, but another and a more immediately vital phase of the question now presents itself. In 1883 the Harvard Veterinary Hospital was opened on Village Street with ten stalls, and the Harvard Veterinary School was established, having its accommodations at the Bussey Farm. The Hospital was soon found to be too small, and eleven stalls were put in on the second story. It was then found that the location of the School at the Bussey Farm was inconvenient, and in 1884 the University bought a piece of land adjoining the Hospital on Village Street and erected thereon a building containing ten additional stalls, class-rooms and a dissecting-room.

From the beginning to the present time the average number of students has been about twenty, and thus far this child of the College has been given to understand that the maternal purse is not to be drawn upon for its support and that it must earn its own living. It has been engaged in a remarkably successful endeavor to that end.

Of the wisdom or the necessity of this course in the past your Committee expresses no opinion. We assume that it was well-advised. On entering upon our duties this year and upon examination of the Hospital and School and upon inquiry, we find, however, a condition

of affairs which we believe demands your consideration with a view to the definition of a policy to be pursued hereafter.

The Hospital is not on a main thoroughfare. It is immediately surrounded by dwelling-houses. The limit of accommodations in the Hospital has already been reached. The students are dependent upon the Hospital for their clinical instruction. There is no other place to which they could go if they would. The success of the School is largely dependent upon the amount and variety of clinical instruction furnished. This department has reached, we believe, as great a degree of success as is likely to be attained with its present accommodations. Unless these are improved we should not expect that the School would maintain a healthy growth or that it would be likely to attain higher standards than have already been reached. The present status of the School is, we believe, as good as, if not better than, was to be expected, considering the accommodations furnished and the conditions under which it has been operated.

Moreover, inasmuch as when a school ceases to go on and up it is in danger of declining relatively to other institutions, we feel that some better opening for progress and growth is desirable, if not necessary, for the prosperity of the School.

The Hospital part of the building does not belong to Harvard College, but is leased to the Corporation, and the Corporation is now a tenant at will. The owner is willing to make a new lease, as we are informed, with a rental equal to six per cent on the cost, or \$1280 per year, the lessee paying taxes.

One of the first questions which presented itself to your Committee was whether it was expedient that the College should take a new lease of the portion now devoted to the Hospital, and if so, for how long a period?

The College has practically built an addition to a building belonging to others. The value of this addition depends upon the goodwill, the generosity of the owner of the Hospital. The interests of the owner of the Hospital and of the College are, to be sure, at the present time to a certain degree mutual, but if the College makes in that location any further expenditure for land or buildings, it will have more to lose, and there will be a greater chance of loss, because the Corporation will be the more helpless whenever a renewal of the lease is desired.

It seems plain that the College should not take a long lease of the Hospital premises, nor indulge in any expenditure for additional land or buildings adjoining its present quarters, without first obtaining from the owner of the Hospital an option to purchase at any time on reasonable terms.

It seems further to your Committee that it is unwise to take action looking to growth in the present location. One or two houses can now be obtained, it is said, at a cost of about four dollars per square foot, but there is no assurance that other estates could thereafter be purchased if desired, and it is obvious that every additional investment by the College will increase real estate values in that vicinity, and place the Corporation more absolutely at the mercy of the owners of the surrounding land.

For the foregoing reasons your Committee believe that the investment of the College on Village Street should not be increased, but that steps should forthwith be taken toward securing another location where the conditions would be favorable to growth.

We believe there is a wide and important field of usefulness for this School and Hospital. There are many hospitals for human beings. There are in this state no adequate hospitals for animals. Some of the greatest discoveries in medical science have been reached through the treatment of the diseases of animals. The Hospital in the seven years of its existence has paid \$16,800 for the support of the Veterinary School. Were the accommodations furnished, it would undoubtedly grow to many times its present size. Harvard University ought to have a Veterinary School and Hospital whose character and accommodations and work should be on a scale more nearly commensurate with the field of operations which they purport to cover.

Impressed with the foregoing views this Committee requested that a committee should be appointed by the Corporation to confer with them. At the conference the views of the Visiting Committee were laid before the members of the Committee of Three appointed by the Corporation, and the members of the Visiting Committee expressed their willingness to aid the Corporation in selecting a site, and did in fact suggest one or two sites which they deemed to be eligible, and also expressed their willingness to aid in securing such donations as might be necessary to justify the purchase of an adequate piece of land and the erection of suitable buildings thereon.

These suggestions and proffers of assistance met with no expression of approval from the majority of the Committee of the Corporation, who spent much time in impressing upon the Visiting Committee the various financial disabilities of the University.

No satisfaction was expressed that the Visiting Committee had taken an interest in the School, nor was there any intimation of desire that such interest should be continued.

It may not have been the intention of the Committee of the Corporation to discountenance or discourage activity on the part of the members of the Visiting Committee, but since that meeting they have

felt that it was not desired that they should take any action looking to a change of location of the School or the enlargement of its accommodations.

It is believed that a Visiting Committee, if cordially supported in its efforts by the Board of Overseers and by the Corporation, might materially assist in placing the School and Hospital upon a more suitable financial foundation.

Respectfully submitted,

GEORGE G. CROCKER,
THEODORE A. DODGE,
LUCIUS M. SARGENT,
A. S. BIGELOW,
LAMONT G. BURNHAM,
G. E. WILDER,
GEORGE G. KENNEDY,
SAMUEL A. HOPKINS.

Presented November 18, 1891,

The Committee on Reports and Resolutions return herewith the report of the Committee to Visit the Veterinary School, of October 21st, 1891.

At the suggestion of the Visiting Committee a meeting was arranged between that Committee and the Committee on Reports and Resolutions. The Visiting Committee intimated a desire, before proceeding further, to receive an expression of the views of the Overseers on certain points. While desirous of doing whatever might be in their power to strengthen the position of the Veterinary School, the Visiting Committee was unwilling to take further or more active steps towards that end unless its members felt assured that in taking such steps they were proceeding in full harmony with the policy and interests of the University.

So far as your Committee is competent to form an opinion, it would appear that an endowment fund of not less than \$250,000 will ultimately be found necessary to place the Veterinary School and Hospital on a satisfactory basis. The institution at present has no endowment whatever.

The Visiting Committee appears to have been most faithful in the performance of its functions, and its members expressed an earnest desire to do individually and collectively whatever could judiciously be done to foster and develop the School and Hospital, and to obtain money for it.

It is a noticeable fact that, in Massachusetts, and in the more immediate vicinity of Boston, where there are so many endowed institutions for every possible purpose, — charitable, medical, and surgical, — connected with the human kind, no institution of a similar character should exist intended to care for animals. Such a want is not likely to be permanent, inasmuch as some such institution is obviously called for on every ground, whether of humanity or economical. While the gift from one or several sources of the whole amount named would be a great public benefaction, it would be a considerable point gained could a sum of \$50,000 now be obtained to secure the ownership of a permanent site for the Hospital and so avoid the objection referred to in the report of the Visiting Committee of placing the institution in the future through present improvements at the mercy of the holders of real estate which it does not control; and if the Visiting Committee could bring this result about it should receive all possible encouragement and aid in so doing: but anything less than this which it might fairly be hoped could now be obtained in the way of gift or subscription would, in the judgment of your Committee, probably cost the University more than it would be worth to the Hospital and School. Unless, therefore, the members of the Visiting Committee see opportunities to secure from sources known to them some considerable sums adequate to the immediate purchase of a site and which may serve as the basis at least of an ultimately sufficient endowment, it would seem to your Committee better that matters should be allowed to rest as they are in the hope that some individual of large means, interested in benefactions of this class, — and possibly stimulated thereto by members of the Visiting Committee, — will presently by gift or bequest endow the institution in the necessary amount. Judging by the experience of the past, it may fairly be hoped that this will come to pass in due course of time.

Under these circumstances, your Committee would recommend that the report herewith returned be printed in the regular series, and that a copy of the present report be forwarded to the Committee to Visit the Veterinary School for its information.

All of which is respectfully submitted.

By order of the Committee,

CHARLES F. ADAMS, *Chairman*.

XVIII.

REPORT OF THE COMMITTEE ON SPANISH.

April 13, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

GENTLEMEN, — Your Committee on Spanish beg leave to report that one member of the Committee, Mr. Joseph R. Coolidge, having resigned on account of absence in Europe, Mr. Stephen Salisbury was appointed to fill the vacancy.

Several conferences have been held with Professor B. H. Nash and Asst. Professor Marsh of this department, the Committee believing that to be a better way of getting information in regard to the instruction than merely attending recitations. The zeal and efficiency of Professor Nash, who is in charge of the department, seem to be somewhat hampered by his inability to do justice single-handed to the large number of students taking the courses in Spanish; there were this year 127. Fortunately Asst. Professor Marsh, of the department of Comparative Literature, could come this year to Professor Nash's aid, otherwise he would have been unable to carry on his department. It would seem desirable that some permanent and less fortuitous relief should be provided for. Another difficulty with which the department apparently has to struggle is that of inadequate accommodation. This makes it impossible to hold the required "snap" examinations through the year in an effective way, and consequently they are not held at all. This, in turn, probably increases the proportion of students who take Spanish as a "soft" (easy) elective; what that proportion is it is, of course, difficult to determine, but it probably is considerable.

A very crying need of the Spanish department is a working library, such as other departments — and notably the French — already have. The nucleus, at least, of such a library cannot be obtained too soon if efficient work is to be expected. If there is to be a library, there should also be a place to put it in. And this leads your Committee to suggest the grouping together of the libraries for the departments of languages — such as the French, German, Spanish, Italian, &c. Certainly this would seem not only desirable but essential, if the intention of the College be to give anything more than the most elementary instruction in modern languages; to give any attention to the philosophy of languages, or to anything in the nature of comparative literature. Such a juxtaposition of these working libraries

could not fail to be of mutual advantage to all the departments — to the French and German as well as to the Spanish and Italian. It is very clear that the Spanish and Italian departments should not be separated.

A certain proportion of those who take Spanish do so simply as part of the study of general literature, but there are others who take it with a distinct view of fitting themselves for their future careers as engineers, mining superintendents, merchants, &c., in Spanish-American countries. With the development of our relations with Mexico, the West Indies, and the South American Republics this number is likely to increase. It, therefore, seems to your Committee that the Spanish department should be regarded as one of very considerable possible importance, as furnishing opportunities for more than a “soft” course, for more even than a pleasing indulgence in modern Spanish literature, and that it should be administered by the College authorities with as much fostering liberality as circumstances will permit.

GEORGE B. SHATTUCK,
SAMUEL ELIOT,
STEPHEN SALISBURY.

XIX.

REPORT OF THE COMMITTEE ON INDO-IRANIAN LANGUAGES.

April 13, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY:—

The Committee on Indo-Iranian Languages beg leave to offer the following report:—

The worth of this department is to be measured, not by the number of its pupils, but by the importance of its work. It would deserve liberal support, though it produced but a single Sanscrit scholar a year; for that one scholar is more likely than not to bring to our knowledge in the far west much of the treasured wealth of Oriental myth, poetry, and tradition, or else to levy on the mother tongue precious contributions to classic philology. An elective in Latin, History, or Philosophy may be taken without any ulterior purpose. No student takes Sanscrit without meaning to use it, or perseveres in it without the capacity of using it for some valuable end.

But it should be the object of a university in all its departments, not only to educate its pupils, but to diffuse knowledge and to multiply the means of knowledge. Publication is one of its appropriate functions, and that especially, as to books which, while of great intrinsic value, can have but a limited circulation. In the Indo-Iranian department it is to be hoped that a publishing fund may be established. Its income could not be misapplied while Professor Lanman remains in office, and when, long hence we hope, he shall have a successor, it is hardly possible that his place should not be filled by a man of like claims to confidence. In furnishing an essential text-book he has already drawn on his own resources. A member of your Committee has prepared for publication, and printed at his own cost, a volume which will be welcome to Sanscrit scholars on both continents, and he has another volume in press. He is thus expending in advance, with no intention of having it refunded, the estimated income of fifteen thousand dollars, which your Committee would regard as the limit of their expectation, if not of their desire.

The last year's Committee on the Indo-Iranian Languages, in their annual report, spoke of the expediency of establishing a system of publication in the name and under the charge of the University. Your present Committee would suggest the possibility and expediency

of some definite arrangement for this purpose. The University has a right to the reputation of its officers. Yet no year passes when some of them do not issue works, either of special timeliness or of permanent value, which pass into the book-market without drawing the attention of the public to their source. The Johns Hopkins University wins merited fame by its *imprimatur* on all that proceeds from its teachers and its resident graduates. Were the same policy pursued by Harvard College, its world-wide reputation as a seat of learning would be perpetually echoed and enhanced by the contributions of its eminent officials. Not to speak of the living, or of any but the recent dead, would it not have been greatly to the honor of the University, had the works of Peirce, Gray, and Bowen in their several departments borne and retained its imprint?

We would not recommend the use in this behalf of the general funds which, we know, can bear no additional drain. But there are already in existence or in certain prospect publication-funds for special departments, which, were the College to establish a suitable agency, would be rapidly increased and multiplied. The Library would be the proper seat of such an agency, and we would suggest that the requisite work might be performed by a member of the library staff.

Such books as would naturally have an extensive sale might be put into the hands of substantial publishing firms, whose names might appear in the title-page along with the University, and it is believed that such books would be largely helped in their circulation by the double imprint, while the agency could always secure better terms for the author than he would be likely to negotiate in his own person. As for the class of publications that necessarily have only a limited demand from public institutions, advanced scholars, and scientific men, the publication by the University would cheapen them for the purchasers by saving the commissions of middle-men, would secure ample notice of their issue, and would enable those who wanted them to know where and how to obtain them. With reference to books of this class, for which the demand is small and yet may be continuous for a series of years, as in the very department which we represent, the library agency would offer still other and greater advantages. Take, for instance, the volume just issued and that now in press to which we have referred. They are published by Ginn & Co.,—a firm favorably known in this country and in England, probably not known in the university towns of Germany. The demand for these volumes, small as it is, may last for many years. The firm may cease to be, may change its name, or, retaining it, may alter its line of business, and of course its list of corresponding firms. At any rate it can have

no motive for keeping Sanscrit books before the learned world by continuous or repeated advertisement. Still farther, it is no unprecedented thing for a firm, on its dissolution, to sell for melting-down the plates of valuable, but not marketable books. Now if such books are published by the University and stored in the Library, it is known where they can be had when they are called for, and the plates can be preserved for future reprint if needed. At the same time, in such a case it would be a wise economy to print very small editions of books of this class, and to make the issue of added copies contingent on the demand for them; while, otherwise, needlessly large editions must be printed to meet demands barely possible, but not probable, and the extra capital thus invested, with a remote and doubtful chance of reimbursement, adds essentially to the price of the books.

The proposed agency would be of service to the Library and to the University as a medium of exchange. Such periodicals as passed through its hands could be exchanged for those issued by other learned bodies; while gift-copies of our publications in every department would secure return-copies from American and foreign institutions of learning.

The Library Bulletin would be the best possible medium for advertising such books as are not designed for general circulation and use. It could give not only titles, but brief abstracts, — in fine, all the information which an intending purchaser would need and crave. The Bulletin would have an added value as a record of the publications of the University, and would thus not merely lie for a while on its reader's table, but would be preserved and bound for reference. Meanwhile there would be an accumulation of ample materials for a descriptive catalogue of University publications.

All which is respectfully submitted.

A. P. PEABODY.

HENRY C. WARREN.

JULES LUQUIENS.

REPORT OF THE COMMITTEE ON THE SEMITIC LANGUAGES.

April 13, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY :—

The work in this department was pursued during the academic year 1890-91 with gratifying success by an increased number of students. An advanced course in Hebrew was attended by six ; there were six in Arabic, two of them in an advanced course ; and four entered on the study of the Phœnician. Of these last, one has made such proficiency as to commence the preparation of a Phœnician vocabulary, which he intends to carry forward toward completion ; although, since he began, a similar work has appeared in Germany. In addition to these courses Professor Toy has given lectures on the History of the Hebrew Religion, on the History of pre-Christian Hebrew Literature, and on the Political and Literary History of the Bagdad Califate.

Professor Lyon has had the direction of the elementary course in Hebrew, has had two courses in Assyrian, and has delivered courses of lectures on Babylonian-Assyrian History and on the History of Israel. This last course deserves special mention, as it in part supplies, in methods equally scholarly and attractive, the Biblical knowledge which before the time of Sunday-schools used to be acquired, though in simpler form, in Christian families, but which in the average student of the present time is entirely wanting. Professor Lyon, in fixing the place and office of the Hebrew prophets severally in the history of Israel, draws the attention of his class to the significance of obscure passages in their writings, and to the transcendent wealth of poetical allusion and imagery, which often needs interpretation in order to be fully appreciated.

Though our report officially covers the last year only, we are glad to anticipate that of the present year by saying that the attendance at the lectures on the History of Israel is nearly three times that of last year, that in the Assyrian language there are eight students for last year's four, and that the entire number in the Semitic department is more than doubled.

For the last year's work prizes to the amount of two hundred dollars were offered and honorably won for special diligence and proficiency in this department, and the larger sum of four hundred and

fifty dollars is at its disposal for the current year, in case it can be thus advantageously employed and worthily bestowed. In this department prizes are of peculiar service, owing to the expensiveness of many of the text-books. The work, too, is so arduous as to leave little time for pecuniary self-help.

At the last Commencement one of the Semitic students received the degree of Doctor of Philosophy, and has been appointed to a professorship in Bryn Mawr College; another took the highest honors in the department, and is now, while engaged in advanced study, an assistant teacher, and a third took honors as a Semitic scholar. In addition to their class-work Professors Toy and Lyon have attended throughout the year the regular meetings of the Semitic Conference, taking, of course, the leading part in the work by which its members are actively contributing to higher attainments and new research in Semitic languages, literature, and learning. The professors during the last academic year also delivered several public lectures in a series specially designed as "An Introduction to the Study of the Bible."

The Semitic Museum had its formal opening on the 13th of May, 1891, when addresses were made by the President, by Mr. Schiff to whose generosity we are indebted for its establishment, and by Professors Toy and Lyon. The balance of Mr. Schiff's donation will have been nearly expended by the latest orders in behalf of the Museum. The collection is of inestimable worth for the unique value of many genuine objects of remote antiquity which have been procured and given, for the admirable selection of casts, for the stimulus which it affords to Semitic study, and for the object-lessons which it furnishes as to many matters in which description is at best indefinite and vague. Room is wanting for the proper placing of some of the larger objects and for the most desirable grouping of others; and it is to be regretted that there must be a ten-minutes' walk between the lecture-room and the illustrations which the Museum affords.

In the last year's report the need of a working library was named. With characteristic promptness and kindness Mr. Schiff has met that need by the gift of one thousand dollars, — a hopeful beginning, yet leaving present and future demands of the department unsupplied. Nearly all of this sum has been already expended under the direction of the professors. The books are duly catalogued as belonging to a branch of the University Library, are placed under the care of a student who gives his services as librarian, and are deposited in a room in Sever Hall which has been temporarily assigned for the use of the department till better arrangements can be made.

It is hoped, however, that at no great distance of time the Museum, Library, and lecture-rooms may be brought together. Among the

possible new buildings on College ground none can be more desirable than one which should furnish such accommodations for the Semitic and Classical departments, and for others also that have like need of connected rooms for collections, libraries, and class-rooms.

It is enough to say of the Semitic professors that they have created this department almost out of nothing, and have secured for it the honored place which belongs to it of right, but which only ability, scholarship, and teaching power of the highest order can command for it in a fast and materialistic age like ours.

All which is respectfully submitted.

A. P. PEABODY, *Chairman.*

REPORT OF THE COMMITTEE ON THE DIVINITY
SCHOOL.

May 11, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY :—

There is no need of repeating what has been said in former reports as to the ability, assiduity, and successful work of the permanent Professors of the Divinity School. We have equal reason to express our high appreciation of the services of Rev. Mr. Hale as Instructor in Homiletics, and of Rev. Mr. Morison, the Librarian, whose charge is made increasingly onerous by the lack of sufficient space for clerical work, the delivery of books, and the accommodation of readers.

In the absence of Professor Peabody, Rev. Dr. Brooke Herford and Rev. Dr. William J. Tucker have given Lectures on Pastoral Care and the Conduct of Worship. Dr. Herford's return to England deprives the Divinity School and the University of a teacher, preacher, and friend, who has made his influence beneficently felt in more ways than we can easily specify, and who will be remembered with enduring gratitude. As for Dr. Tucker, we can only say that, could his lectureship be made a permanent institution, it would be of inestimable worth to the successive classes of students.

We trust that Professor Churchill's appointment will, if not in form, in fact, be permanent; for it would be impossible to replace without serious loss his instruction in elocution and in pulpit oratory.

Professor Thayer's place during his absence has been filled by Mr. Francis A. Christie, who has shown so rare ability as a teacher and lecturer, that, did the funds of the School permit, nothing could be more desirable than the continuance of his services.

In saying this we have reference to the actual needs of the School; for while the present Professors have their time fully occupied, and there is no one of their courses that can be dispensed with, the range of studies might be largely increased, to the advantage of all the students, and especially of the graduates of other Schools, who form a large proportion of the members of our own. Thus in the New Testament, in addition to the critical study of the text, there is room for several different, though kindred lines of instruction; as, for instance, the history of the Canon and of the literature appertaining to it, the mutual relations and the comprehensive scope of the writ-

ings that constitute the Christian Scriptures, the Pauline element in Christian theology, and the Scriptural grounds on which the leading sects of Christendom base their several beliefs. In the Oriental department the Professors are overworked, yet there is a need which they have no time to fill, of a course in the continuous critical study in the original language of some book or books of the Old Testament. The Ethics of the Hebrew Scriptures would also furnish materials for a fruitful course, for which no man is so well qualified as Professor Toy, could he be relieved of a part of his elementary work.

In the scientific study of Ethics the Divinity School at present furnishes no instruction. So long as this is the case, we would suggest the expediency of giving to one or more of the College courses in Ethics a place among the electives of the School. There is no department of more importance than this in the training of a teacher of morals and religion.

Reference was made in last year's report to the importance of instruction, such as might be given by a clergyman of large experience and broad sympathies, in the actual beliefs, institutions, discipline, and present state of existing denominations in our own country, so that the student may enter on the duties of his profession with some accurate knowledge of the religious world, of which he is too prone to exaggerate the importance of his own section, as the Chinaman does that of the Celestial Empire, as paramount above all other kingdoms.

A student for the ministry ought also to have a certain amount of legal knowledge, which might come better from a lawyer than from a minister. He should learn his own legal obligations as a parish minister, and the rights thereto corresponding. He should be instructed as to his legal no less than moral responsibility in the charge and disbursement of trust-funds that may be under his custody, and as to the importance of having the accounts of such trust-funds carefully kept and duly audited. He should be made conversant with the laws that regulate marriage; and especially, if he does not decline, as many ministers do, to perform the marriage service in cases in which the rule of the New Testament would prohibit marriage, he should possess accurate cognizance of the laws of divorce and the practice of divorce courts, lest he find himself in complicity with bigamy.

In order to furnish additional instruction the income of the School must be increased. It has been suggested that it is for various reasons expedient that the Divinity students should be charged the same tuition fee that is paid by other members of the University resident in Cambridge; that is, that they should pay \$150 *per annum*, instead of the present fee of \$50. Your Committee are not unanimous in rec-

ommending this change; but they deem it fit that the considerations in favor of it should be clearly placed before your Board. A very large proportion of the Divinity students are beneficiaries. There are two scholarships of \$500 each, and the remainder of those who are assisted from the funds receive an average annual amount of \$309, — a sum a little more than \$30 in excess of the necessary cost of tuition, room-rent, board, and fuel. There is, so far as we can ascertain, no other Divinity School which gives its students aid to the amount of more than \$175. At Andover a beneficiary receives from \$100 to \$150, his expenses ranging from \$200 to \$300. Were our beneficiaries charged for tuition the same fee that is paid in the Law and the Scientific Schools, they would still be in a better pecuniary condition than the students of any other Divinity School of which we have returns.

It is, at least, an open question whether there are sufficient reasons for placing Divinity students in a peculiar position as to their pecuniary liabilities. If without resources at their command, they have equal opportunity, and ought to have equal ability, of self-help with other graduate students, and there is no profession in which so essential service would be rendered to the student himself by such modes of self-help as might be open to him before entering on his course or in his long vacations. Then, too, a minister, if fit for his work, is well provided for from the time that he leaves the School, while a young lawyer or physician has to wait several years before he can earn a living; and the average salary of well-educated ministers probably exceeds the average earnings of equally well-educated lawyers and physicians.

Then, too, it may seem desirable that eleemosynary associations should, so far as is possible, be detached from the clerical profession. The clergy would thus hold a higher position in the regard of the community at large. The profession might, also, both lose and gain, equally to its profit, recruits to its ranks. There are undoubtedly cases in which a devout and right-meaning young man, with slender capacity, falls into the Divinity School by a certain *vis inertiae*, because he can thus postpone for three years the question of self-support; and his destiny on leaving the School is among those excellent men who have every good gift for the pulpit except the needed power of thought, diction, and utterance, who serve for a while as mere stop-gaps, and then lapse into a still more serviceable silence. On the other hand, there probably are young men of high religious principle and purpose, and in prosperous condition, who, perhaps unconsciously, omit the ministry from their range of choice because they virtually regard it as a profession for men of slender means and dependent condition.

Now we cannot help giving aid to those who seek and deserve it, as there are funds destined by their donors for that purpose, which cannot honestly be otherwise used. But we regard it as eminently desirable that the Divinity students who are aided by these funds be put upon the same footing with the incumbents of the College scholarships, by having it fully understood, by the public as well as in the School, that the sums given are bestowed in recognition of meritorious scholarship determined by a high and rigidly impartial standard, and that under no circumstances whatever will they be bestowed where that standard is not reached.

As to the tuition fee we deprecate immediate action, or action opposed to the deliberate judgment of the major part of the Divinity Faculty; but we commend the subject to the careful thought of those most nearly interested, and hope that the question may not be suffered to subside till it has been fully considered and discussed in all its bearings.

All which is respectfully submitted.

A. P. PEABODY, *Chairman.*

XXII.

REPORT OF THE COMMITTEE ON ENGLISH LITERATURE.

May 2, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY: —

The Committee on English Literature, after several talks with one another and a conference with the professors and instructors in the department, offer this report to the Board of Overseers.

The printed programme of the department shows the work laid out for the present academic year. This is so full and clear a description of the courses as to render it quite unnecessary for this Committee to go into details concerning them. The Overseers have probably received this paper or can readily obtain it. The range of instruction is generous. It begins with two courses in Anglo-Saxon, goes on with Chaucer, the Elizabethans, Shakespeare, the Nineteenth Century, Literary Criticism since the Sixteenth Century, and closes with two courses on the Nineteenth Century. To the courses of this year others are added, or substituted for them, in other years, so that an undergraduate in his four years has an ample opportunity for covering a great deal of ground. The programme states that it is proposed to give (1) a scientific knowledge of the origin and development of the Literature, and (2) a general acquaintance with it. So far as the Committee have observed, these objects are attained.

The number of students taking the courses in English Literature is large, yet not so large as might be desired. Twenty-five only have taken the course in Anglo-Saxon prose under Professor Child, and that in Anglo-Saxon poetry under Asst. Professor Kittredge. This is reported as a larger number than in former years, but it seems a small one considering the host of young men now gathered at Cambridge. Thirty students, more than one half being graduates, have read Chaucer with Asst. Professor Kittredge. Fifteen, chiefly graduates, have taken the Elizabethan writers with Asst. Professor Wendell. The stream runs fuller towards Shakespeare, who has been studied by about one hundred under Professor Child; and perhaps he thinks his class quite large enough, but the Committee wish it were far larger for the sake of the College and the community. Thirty have followed the Literature of the Seventeenth Century under Professor Briggs. Twenty have taken Literary Criticism since the Sixteenth

Century under Mr. Fletcher. One hundred read the poets of the Nineteenth Century with Professor Hill during the first half-year, and ninety are now reading the prose writers of the same century with Mr. Gates, who mentions the encouraging fact that some of his pupils have written extended theses on such subjects as John Henry Newman, the Oxford Movement, and the Development of Prose Style. Asst. Professor Wendell has a single pupil in the Courses of Research for Special students offered to Graduates, who is engaged in pursuing Satirical Literature from its beginning in England to the end of the Elizabethan period.

It would undoubtedly be a great gain to this department could a room of cheerful size and aspect be set apart for it. A still greater gain would come with more liberal supplies of books, particularly of those difficult for a student to obtain, whether in a department library or in the General Library. The reading-room recommended in the last report of the Librarian, with a subsidiary room well fitted with all desirable books in English, is a proposal much to be commended.

SAMUEL ELIOT,	}	<i>Committee.</i>
HENRY A. CLAPP,		
HORACE E. SCUDDER,		

XXIII.

REPORT OF THE COMMITTEE ON GOVERNMENT.

May 11, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY : —

The Committee on Government submits herewith its report for the year 1891 : —

Several visits have been made by different members of the Committee at various times to University Hall in Cambridge, and the workings of the present disciplinary system of the College have been studied on the spot. The whole Committee also had a long conference with the present Dean.

We believe that the new disciplinary methods of the College are working well. Without irritating students, and without throwing any undue burden on the teachers in the College, already hard worked, the system, as administered, exercises a very salutary and a constant check on all the students. It is impossible for any student to be absent from College even for a day without the fact being actually known to some officer of the College ; and when we speak of actual knowledge, we mean, not merely that the fact is recorded on the books, but that it is actually present to some officer's mind. In this way the laxity of attendance which, however exaggerated by common report, did actually exist in the College some years ago, has considerably diminished and regular habits are encouraged. When a man for some reason, good or bad, does absent himself from one or more recitations, without waiting to know if he has been found out he now presents either a good excuse or an honest confession of error. We regard even the confession as valuable, for the necessity of making it deters men from cutting recitations.

The administration of such a system requires considerable clerical force, as the absences from College exercises must be recorded and the records must be properly tabulated. To deal with the students themselves requires good judgment and a high degree of executive ability. In our opinion the new Dean, Mr. Briggs, has both these qualities and is well fitted for his position. We wish also to reiterate our opinion that in Mr. Montague Chamberlain the College has an excellent officer, admirably suited to the very difficult position he holds.

The necessary labor of these officers is so considerable that they should be relieved from the clerical details of their work as much as possible. Early in the year, owing to the appointment of one of their

subordinates to another position, both these gentlemen were much overworked and barely escaped serious illness. It would have been impossible properly to fill their places and we regard the danger run by the administration of the College as a very serious one.

We have made special inquiry into the accuracy of the reports of attendance at the different College exercises, and we are informed that while these reports give a reasonably fair notion of the attendance of the individual students, yet they are by no means as accurate as could be desired. Most of them are made by beneficiaries of the Price-Greenleaf Fund, and we are informed that some students thus receiving aid seriously object to doing any work for the College, and that the reports of attendance suffer through the unwillingness of these men to discharge the duties imposed on them. It seems to us strange that men receiving help in pursuing their studies should be unwilling to make a very moderate return for such help. The Price-Greenleaf student is expected to give the College only four hours a week — certainly no very great tax on his time. It is possible that a clear statement of the facts and of the rights of the case, officially made to these young men by the authorities of the College, would bring them to realize the impropriety of their conduct.

After the Christmas recess the Dean and his subordinates were much perplexed by the absence of students from Cambridge beyond the time allowed them by the rules. In many instances these students were absent with the knowledge and approval of their parents, who thought that a strict enforcement of the rules in the case of their own children would be unduly harsh. To compel a young man to choose between disobeying his parents and disobeying the authorities of the College is undesirable; yet in just this position some students were placed. Without formally excusing the students, therefore, it was decided to send to the parents a letter of information, remonstrance and warning, and we have reason to believe that this course had an excellent effect. The parents of students should bear in mind that no college can maintain proper discipline if such discipline is assumed by them to be arbitrary and unjust.

If, as we believe, the disciplinary system which Harvard College has inaugurated is a wise and a successful experiment in the management of young men, it is an experiment worth to the College a considerable expenditure of money. We recommend to the authorities that all possible aid be given to the Dean and to Mr. Chamberlain in perfecting and in administering this system.

For the Committee,

FRANCIS C. LOWELL.

REPORT OF THE COMMITTEE ON GERMAN.

May 21, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY:—

The undersigned Committee beg leave to submit the following observations:—

The number of students in German at this University is at present about 860. The classes are almost all so large that the teachers can devote but little attention to each individual student. This circumstance renders it especially important that the preparation for the instruction they are to receive should be as nearly equal as possible among the students when they enter their classes. To this end it seems most desirable that the examinations for admission should be as serious and strict in German as they are, for instance, in Latin.

The stated requirement in Latin is: "The translation at sight of simple prose (with questions on the usual forms and ordinary construction of the language)." As to German, it is: "The translation at sight of simple prose." The difference between these two requirements is not great in appearance. But we are informed that, as a matter of fact, the actual difference in the substance and mode of the examinations is important; that it ordinarily takes a student at least two years to prepare for the elementary Latin examination, while the average time for the preparation in German is under one year and often not over six months, and that in the examination itself only one hour is assigned to German, while two hours are given to elementary Latin or Greek. We are of the opinion that no fair test of a student's ability to translate German at sight can be offered by the present perfunctory way in which the elementary examination is treated.

We do not mean to discuss here the relative importance of the study of the ancient and of modern languages. But in view of the vast importance of a good reading knowledge of German to the earnest student of history, philosophy, philology, political economy, the natural sciences, etc., we believe that young men entering the University ought to be able to master at least the rudiments of German, and that the examinations should be so arranged and conducted as to give a full test of the students' ability to read that language, instead of furnishing, as we are informed they now do, merely an incentive to the hasty acquisition of a smattering of it.

We therefore respectfully recommend that the examination for admission in German be ordered to occupy two hours instead of one, and that the requirements be appropriately raised.

C. SCHURZ.

J. ELLIOT CABOT.

CHARLES E. GRINNELL.

REPORT OF THE COMMITTEE ON THE BOTANIC GARDEN.

June 8, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY:—

For the Committee on the Botanic Garden, I beg to report that, owing to the family affliction of Professor Goodale, the annual meeting at the Garden in April last year was not held.

The Committee held a meeting on the 30th of May this year; found the Garden in good condition; were conveyed thence to the Botanical Museum just completed, and were agreeably surprised at the extent, the construction, and the arrangement of the rooms—well aired, well lighted, and, we have no doubt, well warmed, and as fire-proof as could be made.

The glass flowers, handsomely cased, nearly fill a large room, and will be increased four-fold if the artists live and retain their interest and loyalty.

The fossil plants, presented by Professor Alexander Agassiz, will be arranged as soon as the cases are ready, and so with the useful products of plants.

The Committee were favorably impressed with the seating arrangements in the Nash Lecture Hall, but already the space is inadequate for the two hundred and twenty students who attend the lectures.

The loss of Professor Watson is very severe, overwork the cause. The Herbarium is in charge of Dr. Robinson, whom Professor Goodale recommends as successor to Professor Watson.

It is needless to add that an endowment of say \$100,000 is needed for the Botanical Department.

HENRY LEE, *Chairman*.

REPORT OF PROFESSOR GOODALE.

May, 1892.

MR. CHAIRMAN AND GENTLEMEN OF THE VISITING COMMITTEE:—

The botanical establishment at Cambridge consists of the following subdivisions: the Botanic Garden and Herbarium, the Botanical Laboratories, and the Museum. Each of these has its own policy, its own needs. During the past year the Botanic Garden has pursued substantially the same course as in former years, and has lived quite

within its income. The Lowell Fund for the support of the Botanic Garden is not yet sufficient alone to support the Garden upon a suitable basis. Miss Anna C. Lowell has for years annually increased the Lowell Fund by \$1000. The income of this fund, therefore, is to a certain extent supplemented by the income of what we call the Botanic Department Fund. The separation of the funds was at the suggestion of Mr. Agassiz, in 1885, in order to secure for the Department the use of the income of certain funds which have been given for specific botanical purposes other than those connected with the Garden. The members of the Committee will see the results of the past severe winter, which we are now trying to repair. A large proportion of our perennials, especially our herbaceous plants, have suffered, but we have restored, as far as it was possible to do so in the limited time, the more important of these, while others have been replaced by plants which we are now trying to introduce from New Zealand. The greenhouses have again been repaired, and promise to be useful for some time longer. The heating apparatus given us by Mr. Hunnewell and Mr. Ames some years ago answers every purpose, and is considered by us a very economical arrangement.

The Committee will observe that our palms are again breaking through the roof. There is doubtless no other way left open to us but to cut these down and begin again. I question whether it would be advisable to advocate at any time the construction of a large palm-house here. The expense of running such a house in the winter would, I think, be too great, when the needs of the Department in other directions are so pressing and obvious. I have no changes to propose with regard to the disposition of the plants or of the money of the Garden.

Second, the Herbarium. It is known to every member of this Committee that the fears which were felt last year in regard to the imprudent manner in which Mr. Watson was working beyond his strength have unhappily been realized. Since Mr. Watson's death work at the Herbarium has been carried on by Dr. Robinson, Dr. Watson's assistant, and by Mr. Fernald, but no permanent arrangement has yet been made by the Corporation in regard to the policy which the Herbarium is to pursue. We are doubtless bound to keep fresh Gray's Manual of Botany and the other books of his botanical series, inasmuch as the copyright belongs to the Herbarium. The cost of this editorial work is considerable, but will be paid for out of the returns of sales of the books themselves. The Committee will be very glad to know that in consequence of the subscription made two years ago, Mr. Watson was able to initiate certain important changes in the management of the Herbarium, and although these changes came too late to be of great service to him, they have shown

in what way the scope of activity there can be increased to advantage. Before the expiration of the subscription we need to secure an endowment for the Herbarium.

Third, the Museum. The Botanical Museum consists of three coördinated parts: first, the Synoptic Collection, illustrated by glass models of flowers. The accuracy and beauty of these models are known not only to the members of the Committee, but to the increasing number of visitors who are enchanted by them. The prosecution of this work is continuous. The elder Blaschka is busy in his home near Dresden; his son has just completed a visit for study in Jamaica, and is now in California. From last accounts, his results were far beyond his expectations. He will be able to carry back materials for the construction of nearly all the more important tropical useful plants, and those of the sub-tropics and our southern belt. It is a pleasure to state that these two artists are even more enthusiastically devoted to their task than ever before, and have most loyally declined to entertain any proposition looking to a breaking of the contract with us. The generous patrons of this enterprise have anticipated all their wants.

The second division of the Museum comprises the fossil plants which have been turned over to us by Mr. Agassiz, and are now lodged in one of the basement rooms. A selection from these can be readily prepared for exhibition at any moment as soon as our cases are ready.

The third division, comprising the useful products of plants, has received very large accessions during the past year. Large invoices have very recently arrived, so that the question which I have already asked the Committee is one which has been forced upon me again, and which happily I have been able to answer. A friend of the College, who desired his name to be kept from the public, promises for the present academic year the sum of \$2500 for the Herbarium and \$2500 for this division of our Botanical Museum. With this sum in hand, and without encroaching upon our capital, I shall be able to construct cases, and in this way carry out the wishes of all our students who are desirous of seeing our rich collections of useful products properly displayed. With this sum we shall be able to build enough cases for one room, but this is not sufficient to enable us to prepare and print the labels for the adequate description of all our products, nor will it enable us to think of printing the illustrated catalogue which is so much needed. While, therefore, I shall not ask the Committee to take into consideration the raising of the sum which I have previously spoken of, but shall hold that in suspense, I desire to announce that the work is for the present going on satisfactorily and symmetrically. To carry out all our plans would

require at least the sum I formerly mentioned, namely, \$30,000, less the sum just promised. An endowment will ultimately be needed of \$100,000.

Laboratories. The Cryptogamic Laboratory during Dr. Farlow's absence is in charge of Professor Thaxter. The instruction and investigations here have gone on uninterruptedly. The laboratories in Phanerogamic Botany, which have been so generously equipped by Mr. Ames and Mr. Hunnewell, are still adequate for our needs, although we are obliged now to take our classes in sections owing to their size. The numbers in attendance are as follows:—

Course 20a	7	Course 3	22
“ 20b	6	“ 2	40
“ 4	12	“ 1	227

The N. C. Nash Lecture Hall has been provided with comfortable seats, which are very much appreciated by all the students. The hall has a seating capacity of 180, but we have more than 220 in attendance; therefore supplementary seats are added each lecture. The ratio of increase during the last few years has been uniform, being not far from twenty per cent. for the last three years. It is very difficult for us to know how we can add fifty more students to our elementary class.

The points which I have presented thus briefly cover substantially all the ground that we need go over at the present time. I remain, gentlemen,

Yours very truly,

G. L. GOODALE.

XXVI.

REPORT OF THE COMMITTEE ON THE ADMINISTRATION OF THE UNIVERSITY CHAPEL.

June 8, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee on the Administration of the University Chapel has conferred with the Preachers to the University, and through one or more of its members has attended morning prayers in Appleton Chapel.

Your Committee is much impressed with the importance and success of the work done in this department of University thought and effort.

The voluntary system in religious matters receives each year a fresh demonstration of its advantages over the former method of compulsory attendance. The students bring to the services as now conducted a cordial support, which is manifested in the number of those who attend the daily and weekly exercises, in the spirit of interest and enquiry which leads many to seek personal interviews with the Preachers, and in the tone of the student press which was formerly hostile to these influences, but is now an ally. There is no longer place for the feeling of contempt or antagonism, which, though limited to but few, still had existence under the old system: it has given place to earnest participation or friendly neutrality. Your Committee gladly credits the evidence of those whose special duty it is to observe and judge the moral and religious tone of the students, and who are emphatic in stating that in the conduct of the great majority of students a marked and steady improvement is discernible. Many influences have doubtless contributed to this result, but among them the removal of the compulsory feature in religious observance and the greater variety and interest afforded by the present system are surely entitled to a place.

The plan of placing the religious interests of the College in the hands of a Board of Preachers, appointed annually, was wisely conceived, and the College has been thus far most fortunate in the men to whom has been entrusted this high service. The opportunity to address these earnest young men upon themes which the scholastic instructor seldom ventures to touch, and which are disregarded in many homes, is a great privilege, and it is gratifying, although not surprising, that it is so esteemed by those upon whom it has been con-

ferred. The Preachers have proved, if proof were necessary, that the active and enquiring mind of youth is hospitable to all truth, and that the heart is ready to respond to every lofty appeal, if only the hand that touches the chord be controlled by absolute sincerity and intense conviction. The Preachers not only give, but receive. One of them, ripe in years and experience, writes: "I have only to add that this Harvard College service has been one of the most enjoyable, and to me one of the most profitable in my life." Another says: "The pastoral work at Harvard is *awfully* interesting. I only wish I had known how to do it better." This is the spirit which animates all. A distinguished visitor from Edinburgh University speaks of the Chapel service of Harvard as "the most religious service, public or private," that he had ever seen.

In the opinion of your Committee it must ever be of the highest importance that as vacancies occur in the Board of Preachers no effort should be relaxed to secure, wherever they may be found, men who can speak with some of the authority of Christ, because sharing in some degree his spiritual insight and sincerity, who, whatever their creed, are broad enough to see that Christianity is larger than dogma, and who have further that *ignotum quid* which places them in warm sympathy with the eager, receptive mind of youth.

The changes in the Board during the past year have been numerous. Prof. F. G. Peabody has been spending his sabbatical year abroad, and Prof. D. G. Lyon has filled his place as Chairman of the Board. Rev. Phillips Brooks, D.D., who has served as one of the Preachers since the inauguration of the new system in 1886, was compelled by other and engrossing duties to withdraw from a service to which he had given labor and enthusiasm in liberal measure. Rev. William Lawrence, D.D., also retired before the beginning of the current academic year. Rev. Brooke Herford, D.D., as if to make the loss to the College of his services as light as possible, filled out nearly his full year's duty before returning to England. Prof. C. C. Everett, D.D., and Rev. Leighton Parks are this year members of the Board for the first time. Rev. E. E. Hale, D.D., has repeatedly volunteered to conduct services when illness or other cause prevented one or other of the Preachers from performing his full duty.

The stated and formal religious services conducted by the Preachers are 1st, Morning Prayers, which include music, Scriptural reading and a brief expository address; 2nd, Vespers on Thursday afternoons during the middle portion of the academic year, a service largely musical (with full male choir — 25 sopranos and altos, 16 tenors and basses); and 3rdly, Sunday evening services, including a sermon by one of the Preachers or by eminent divines of various communions by

invitation of the Board. All these services are well attended, and are marked by a spirit of earnest devotion.

The Preacher conducting morning prayers is in attendance every forenoon during his term of duty at Wadsworth House, and in response to his invitation many students come to talk with him about their plans, their doubts, hopes, and beliefs. This has proved to be a most interesting and valuable part of the work.

Of kindred aim with the influences which centre in the College Chapel are the several religious societies, which show enlarged membership and increasing vitality; the College Conferences, which discuss ethical and social questions; and the courses of lectures upon the study of the Bible and upon the Old and New Testament.

Your Committee is of the opinion that this great power exerted by the College for manhood and morality is not fully appreciated by the public. It is true that a portion of the students do not come within its influence, and for them the College must discharge its responsibility through other forces and by other methods; but the Committee believes that the College ministers to the religious and spiritual needs of the great mass of its students with rare wisdom and success. Your Committee ventures to offer the following suggestions:—

1st. The Preachers appear to be of one mind as to the need of a new Psalter and of a new Hymn and Tune Book. These have long been delayed, but are now in process of preparation. Such laborers, doing such work, ought not to be hampered by unfit or antiquated tools.

2nd. The moral value of the services would certainly be increased if a larger number of the members of the Faculty would more frequently attend. It is believed that the attendance of students would be materially increased by the example. Whether this attendance would cost the individual members of the Faculty more than it would benefit the University is a question for each instructor to decide for himself, and the University in this as in other matters has every reason to trust with confidence to the zeal and devotion of the Faculty.

3rd. The need of a new building for the use of the University Preachers and of the religious societies is keenly felt by all those engaged in conducting the services. This building should contain an auditorium for 400 or 500 persons, a music-room for rehearsals of the College choir, a reading-room and a room for social gatherings. Such a building devoted to the religious and moral interests of the students would emphasize their importance and give stability and permanence to their place in the general scheme of University instruction. It would serve the important purpose of bringing together under one

roof the various religious societies which, unless such a permanent home is provided for them, may show a tendency to separation instead of toward mutual attraction and increasing unity of effort and purpose. At some of the larger universities this need has been already supplied. To those who have especially at heart the moral welfare of the students at Harvard and who are in sympathy with the broad and liberal efforts now exerted to promote this welfare, the gift of a building dedicated to these uses would seem to appeal with peculiar force as a most wise and beneficent act. Your Committee earnestly hopes that this paramount wish of the Preachers may at some near day be realized.

For the Committee :

ROGER WOLCOTT, *Chairman*.

REPORT OF THE COMMITTEE ON FINE ARTS.

May, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY:—

The Committee on Fine Arts report that they have visited Cambridge and have sought to establish relations both with the Professors of the Fine Arts courses and with many in and out of College who have benefitted from their instructions. The courses are as much in favor with the undergraduates as ever and your Committee can only speak in the most cordial terms of the work of the department. It is true that the Fine Arts courses are sometimes elected by the young men as being easy and as requiring little labor on their part. It is difficult to see anything in their general nature which should make them less serious studies than, for example, General History or Political Economy. But possibly the fact that they are thus considered easy is not to be entirely deplored, as the very men who would be likely to elect easy studies are those whom the refining influences of the Fine Arts may affect for good. Certainly the instructors continue to hold firmly the esteem and affection of their pupils. In no way can the College exert more good than through the commanding influence of strong men, no matter what they teach; and in this way at least its Professors have made the Fine Arts department one of the most distinctly civilizing influences in the University.

The Committee record with satisfaction Mr. Moore's appointment as an Assistant Professor. He had served the College for many years and many graduates speak with gratitude of their indebtedness to him and his instruction. He has recently published a work on Gothic Architecture which is both philosophical and simple, and which approaches an old subject from an entirely fresh point of view. It is without an equal among recent works in the same field, and being a thorough scholarly and successful work it deserved to gain for its author recognition and encouragement from the University.

There has been a great and wide-spread increase within the last few years of the popular interest in matters of Fine Arts, and the number of educated young men throughout the country who have chosen some branch of the Fine Arts as a profession has also greatly increased. Meanwhile, at Cambridge, while the number of students taking Fine Arts as an elective has—as might be expected—very

greatly increased, the instruction offered them has not, we believe, materially changed since the early years of the department. Fine Arts courses were elected by students in the following numbers during the years respectively named:—

1875	116
1880	108
1885	200 approximately
1890	330

Professor Norton and Assistant Professor Moore, with certain assistants, have had charge of the department no matter what the number of students. In glancing at the Catalogue, one observes that two professors and one instructor have charge of Semitic languages and history, substantially the same force as that applied to the Fine Arts, although these Semitic studies, we imagine, can hardly attract such large masses of students as those attending the Fine Arts courses. So crowded have these courses become that those young men who are assigned seats at a distance from the Fine Arts lecturer freely complain that they cannot hear him. Surely an elective that attracts so many students deserves the fullest attention from the University. It seems to us on the contrary that compared with other courses, and in proportion to the number of students concerned and the general interest in the subject, the department has an instructive force numerically very small. All will grant that the popularity of the courses is largely due to the influence of the lecturers, but it is also surely due in part to the general awakening of interest in Art throughout the country. In view of these very great changes in the conditions affecting the courses, and while having no words but those of praise for the courses as they stand, it may be well to consider if they might not be amplified, and if so, on what lines. There is the more reason for this consideration because in the very near future the legacy of Mrs. William H. Fogg becomes available, and will result in the building of a modest Art Museum with typical collections for purposes of instruction. It may reasonably be hoped that so evident a sign at Cambridge, that the Fine Arts are recognized as contributing to a liberal education, may not be without its influence and may lead to still more being done for this department either by the University or some benefactor.

The present courses cover substantially the following ground. Professor Norton lectures three times a week; one year on “Ancient Art” and the alternate year on “Roman and Mediaeval Art, with special study of the development of Gothic Architecture and of the Revival of Art in Italy in the Thirteenth Century.” Moreover, he “assists and directs advanced students in the study of special topics

in the history of the Fine Arts'' ; but this year, for instance, out of five students who sought to pursue such a course of research only one was found qualified and was set at work. Assistant Professor Moore gives lectures on the " Principles of Delineation, Color, and Chiaroscuro " and " of Design in Painting, Sculpture, and Architecture " and he has classes in " practice in drawing and water colors." The detailed syllabus of Mr. Moore's courses indicates that his lectures cover in a general way the history of architecture and painting in their great periods. These titles certainly include much ground and are evidently intended to form a general review of art history.

The practice in Drawing and Water Colors is such as to increase the observing powers of the student rather than to make him an accomplished draughtsman. It is given on somewhat Pre-Raphaelite lines, which many artistic people deplore. It may, however, at the very least be argued that these methods are as good as others, if there is no ultimate end in view beyond the training of the critical and observing faculties.

The courses, as we have said, gain immensely from the personal character and influence and charm of the instructors. The lectures are apparently quite discursive and treat as much of the people of the Middle Ages and of the Renaissance as of their Art. They are directed not to the forming of artists or to any technical end, but to nourish a liberal culture and to lead to an appreciation of Art. We imagine that it would be hard to say whether they would be more valuable for the prospective lawyer, architect, or man of business.

There are possibly some ways in which these existing courses might be amplified with advantage to the general student and without making them too special or technical. A graduate from the Fine Arts courses at Harvard, and who is to live in a country which now spends such vast sums on modern Art and Architecture, should have a pretty clear idea of the history and tendencies of Art in its various branches at the present day and in recent centuries. Except in the case of two or three of Mr. Moore's lectures the syllabus of the instruction now given does not reach this ground, and from conversation with young graduates we judge that this information is arrived at only in discursive talks away from the main lines of the lectures. Even then modern art apparently receives but scant courtesy and the students are apt to think it somewhat beneath their serious attention. At Columbia College, as we are informed, a different view prevails. A course of lectures has been established, given by various sculptors, architects, painters, and musicians, in which they speak of their various arts to the students. These are not " smoke talks " nor extra lectures, but form a regular course open to election by the student. We do not know

what success that course has had, but it ought to be successful. It ought also to be possible to arrange a similar course at Cambridge.

Nothing is more inspiring to young men than to be put in close relations with active vigorous minds that are full of the problems of the moment. They thus get in touch with the world of to-day and away for a time from their ordinary recluse life. Looking through the long list of "Public Lectures, Evening Readings, Concerts, etc.," given last year, doubtless with some such end in view and recorded pp. 109-113 of the Catalogue, the only lectures at all relating to Art were some three or four of an illustrated series upon English History, given by — the Professor of Chemistry. It would then be a new and splendid departure, if the Fine Arts Department at Cambridge could in this way be put in closer touch with the hopes and the work of the art world of to-day through the help of some of our many ardent and successful art workers.

Twenty or twenty-five years ago it was comparatively unusual for an educated man to become an artist of any kind. Most of us remember that it was held to indicate an effeminate or unpractical or unmethodical or in some way undesirable sort of mind for a man to adopt art as a profession. That is changed now and throughout the country young men of the best education are adopting art in one form or another as a means of support. Harvard does not keep pace with the country in this matter. Between 1870 and 1880 thirteen young men at graduation expressed an intention of following some form of art as a profession. Between 1880 and 1890 twenty-three made the same statement. It does not seem to us that this increase bears a proper ratio to the total increased number of graduates or the great advance of public interest in the subject. Every American city of size now has its Art School and Paris swarms with American art students. The college graduates are not numerous enough among them, and we think it is because while in college their thoughts are turned in other directions or perhaps never really turned towards art as a work for to-day. With more contact with the growing, ambitious, striving, and hopeful artists of to-day the college student would soon take his full share in these branches of modern usefulness.

When with this end in view we consider amplifying to any extent the existing courses, it is evident that they would of necessity become somewhat more special and technical. If funds for the purpose were available to found a chair of Architecture, the ends in view would perhaps be well met. Such a Professor might surely lecture on Architecture without trenching on Professor Norton's wider field, and he might also teach it not as a profession but as it might well be understood by any banker or teacher or lawyer. Certainly those

fifteenth century "humanists," who first of moderns studied the classics and outlined a liberal education as it has since largely been understood, counted among their own accomplishments not only a critical knowledge of ancient architecture, but an interest in the art work of their own day. They were all either builders themselves or intimate with designers and craftsmen of all kinds. College graduates of our day, who are so soon in turn to become patrons of artists of every kind, may well likewise have an intimate knowledge of art as it is possible to practice it to-day, without in any way becoming specialists or professional. A Professor of Architecture might probably help them to such knowledge.

Professor Chaplin, the late Dean of the Scientific School, in several of his reports urged the foundation of a Professorship of Architecture. He intended it to be in connection with the Scientific School, and argued that as all the technical instruction for an architect is already given in that School, it needed but the appointment of the right man as Professor of Architecture to make the Scientific School an excellent School of Architecture.

It seems to us that such work is more needed in connection with the Undergraduate Department. We should be glad to see a beginning there develop into a real School of Architecture, and cannot doubt for a moment that it would do so. But more is needed to form such a school than the addition of one man. A School of Architecture means a large working library of books, photographs, and casts directly at hand in the school, and it means instruction in drawing, water color, and ornament of a kind the College now does not furnish. More than all, it needs a nucleus of clever students to form that companionship and rivalry and *esprit de corps* which so greatly aid the art student. It would require some time and a large sum to offer these advantages in as attractive a form as they are now offered in Boston to the one hundred or more architectural students at the Institute of Technology. If, however, a beginning is made at Cambridge by founding a professorship, and if courses are given that fairly place art before the students as a modern profession worthy their active attention, and if the new museum proves the incentive that we have the right to expect, we may well look to the possibility of Harvard before many years offering a professional art education to architects and other artists. If this were placed at the high level held by the other Harvard professional schools, it need not compete with the neighboring school at the Institute of Technology. A young man is there supposed in four years to learn not only his profession, but also gain a liberal education. Of course he cannot fully accomplish these ends. It is a course of the very

greatest usefulness, and not to be spoken of but with the gravest respect. But we can conceive of one that should receive only college graduates or their equals in general culture, and keep them for three or four years, like the other professional schools, at work only on professional studies. Adding to such work all the influences and charms of Harvard life, we may be sure that such a high-grade school would be not only popular, but of the highest use. Harvard would no longer stand coldly critical of the present and contented with a review of the remote past, but would thus, as is right, join herself to the many active workers that art claims among us.

The Committee make this report in the hope that discussion may lead to some practical suggestion or movement, and in the feeling that no time would be so opportune for beginning such a development as when the addition of a museum to the University's possessions turns the mind towards the Department of Fine Arts.

ROBERT S. PEABODY.
ARTHUR ROTCH.

[The two other members of the Committee are absent from the country for a prolonged period.]

REPORT OF THE COMMITTEE ON COMPOSITION AND RHETORIC.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE : —

Few persons not intimately connected with the system of instruction now pursued in the College, or, indeed, with the existing Department of Rhetoric and English Composition, have any conception of either the amount or the nature of the work now done by the instructors in that department. In quantity this work is calculated to excite dismay ; while the performance of it involves not only unremitted industry, but mental drudgery of the most exhausting nature.

The above language is undoubtedly strong ; but, while it contains an acknowledgment due to the instructors in the department under review, a recital of the facts will justify it. Instruction in English Composition at Harvard is now divided into prescribed and elective courses, the prescribed courses consisting of what are known as “English *A*,” “English *B*,” and “English *C*.” As the Committee has confined its investigations, so far as the present report is concerned, to certain features in the prescribed work, no further reference to the elective courses is necessary.

“English *A*,” — the course prescribed for the Freshman class — is designed to give (1) elementary instruction in the theory and practice of English Composition, and (2) an introduction to the study of English Literature. The theory is taught throughout the year by lectures ; the practice is obtained in short weekly themes, written in the class-room and criticized by the instructors. One of the instructors in this course writes to the Committee as follows in regard to it and those taking part in it : —

“English *A* is prescribed for all Freshmen ; it has, therefore, been thought unfair to exclude from the course Freshmen who have not passed the entrance examination in English. The number of these men is not very large. Besides, there are a good many special students in the College and the Scientific School who wish to take English *A* in order to work into a class, or as a useful part of their special course. There are about a hundred such men, and very few of them have tried the entrance examination. About one half of these special students are as well fitted for the course as the great majority of the Freshmen are — not very well at the best. The conditioned Freshmen and the incompetent special students, constituting from one-seventh to

one-fifth of the entire number of men taking English *A*, have always made the task of the theme reader more severe than it is naturally, so to speak. They drag down the grade of instruction in the class, and, at best, they simply scrape through the course, and go on to burden the other prescribed courses in English—*B* and *C*. In 1890-91, the lecture-room provided for the Freshmen was so crowded that a division of the class had to be made. It was thought that perhaps some relief from the burden of the unprepared might be obtained by sending them off to be lectured to separately. Accordingly I lectured to about a hundred men, including Freshmen who had been conditioned at entrance and all special students in all departments of the University who had not passed the entrance examination. The themes of these men were not separated from the themes of the rest of the class, and all took the same examination. The best of the special students did very well—quite as well as the best Freshmen—half of the division stood very low.”

The theme writing in English *A* is of the most elementary description; but the compositions in this course, over 6000 in number during each half year, are carefully criticised by the proper instructor, and returned by him to the student. They are then rewritten, and often recast. Owing to the number of these exercises and the constant accumulation of fresh papers the rewritten themes are not read by the instructors, except to determine the final grade of a student whose mark is doubtful. The work of criticising and correcting the English *A* themes is not inaptly described by certain of the instructors engaged in it as of a “stupifying” character, to which it is difficult to give more than four hours of intelligent attention per day; and, judging by a single set of 450 papers, your Committee is disposed to consider the adjective “stupefying” as a mild term to apply to such work, while four hours per day would seem to be an excessive time to devote to it.*

In order to give some idea of what the necessary college work of composition reading now is, the Committee will merely say further that, outside of English *A*, in the prescribed course for Sophomores known as English *B*, it amounted during the current year to 20,000

* Mr. Lathrop writes on this subject: “This year I have read about eighty such exercises every week. At the beginning of the year I have found in my experience (of only two years) that the amount of correction necessary is so great, and the corrections have to be explained so much in writing, that I can read only eight an hour.” To the same effect Mr. Hurlbut says: “At the beginning of the college year I read and corrected eight themes an hour, four hours a day. I could not, however, read for four hours in succession. At present I can read fifteen themes in one hour, twenty-five in two hours; a third hour at the same work is wasted. In one day I read carefully and corrected sixty Freshman themes; the next day, however, I could do no work well. On an average I devote a little over two hours a day to Freshman themes.”

pages of 150 words each ; while in the higher course known as English 12, intended for students who have passed in English *A* and *B* and wish further to pursue the study of composition, it amounted to some 25,000 pages averaging 130 words each. The number of separate exercises annually handed in to all the instructors of the English Department is estimated at thirty-eight thousand (38,000).

A cursory examination of a fractional part of this immense mass of written matter led your Committee to entertain grave doubts whether the difficulty in the situation as it now exists, as apparent in the over-taxed condition of the instructors in the Department of English Composition, was not largely due to defective and inadequate training in the preparatory schools. In other words, as the department is now organized, under the existing standards of admission, the College seemed to be compelled, during the Freshman year, to do a vast amount of elementary educational work which should be done in the preparatory schools.

It is unnecessary in this connection to remind the Board that the academic department of the College has changed greatly within the last twenty-five years. During that period, the age of admission has been gradually raised, until now the average student entering the Freshman class is nineteen years old, instead of seventeen years old, as formerly ; and it would certainly seem not unreasonable to insist that young men nineteen years of age who present themselves for a college education should be able not only to speak, but to write their mother tongue with ease and correctness. It is obviously absurd that the College—the institution of higher education—should be called upon to turn aside from its proper functions, and devote its means and the time of its instructors to the task of imparting elementary instruction which should be given even in ordinary grammar schools, much more in those higher academic institutions intended to prepare select youth for a university course.

Nevertheless, the statement in the College Catalogue of the course of instruction prescribed during the Freshman year, and a slight examination of the papers handed in during that year satisfied the Committee that the students were in this respect imperfectly prepared, and that a large amount of work not properly belonging to it was consequently imposed on the College. The Committee, therefore, concluded to begin its work not with the methods of instruction pursued by the College, but with the methods apparently pursued in the preparatory schools which fit students for college. In order to ascertain what those methods really were, and what results were attained through them, the Committee requested the instructors in

charge of the English Department to call upon all the students attending the English *A* course, including special students, to write papers in the lecture room, setting forth the methods of instruction in English composition pursued in the school in which the writer of each paper had been prepared for college. It must, of course, be borne in mind that where a paper of this sort is called for in a class the instruction of which takes place by divisions, those in the later divisions of the class will have knowledge of what is expected of them, and the papers handed in will to a certain extent have been prepared outside of the recitation-room. When, therefore, these papers, 450 in number, were sent to the Visiting Committee, Professor Hill, in forwarding them, notified the members of the Committee that, in the opinion of the instructors, the papers in question were calculated to give a more favorable view of the quality of the work done than was warranted by the facts. Three-fifths of those attending the course had already written about their preparation in English, their exercises had been criticised, and each of them had thus been shown how to make his production better in form and more interesting in substance. Accordingly, such of the papers as the instructors examined before sending them to the Committee, were found to be in their judgment decidedly above the general average of work done by those whose names were signed to them. The further examination of the Committee fully confirmed the opinion thus expressed by the instructors, and proper allowance on this account should accordingly be made in connection with such of these papers as are included, in fac-simile or otherwise, in the present report.

As already stated, the Committee received in response to its call some 450 papers, the writers of which came from no less than 160 different preparatory schools; a certain additional number had been specially fitted for college by tutors or otherwise. As the present report is intended to operate directly on the preparatory schools, with a view to elevating the standard, and, if possible, changing radically the methods of instruction in English Composition pursued in them, and as this result can best be obtained by showing what is now actually done in each and all, thus bringing the systems in use, so far as they vary, into direct comparison, the Committee has decided to pass the schools referred to in review, so far as it may seem desirable so to do, by printing as part of this report certain of the papers handed in, and further by reproducing in facsimile a number of the papers in order thus to show beyond question what the elementary training in the preparatory schools now really is, and how low a standard, so far as English composition is concerned, is set for admission to Harvard College. Of the total number of schools the

methods of which were set forth in these papers nearly 120, or three out of four, were represented by a fraction over one student each. In order to save space, therefore, no reference has, as a rule, been made by the Committee to schools represented by less than three students, unless something in the papers submitted seemed to indicate that the system of instruction in English pursued in schools represented by a less number was specially deserving of notice. Of necessity the selection had to be somewhat arbitrary; but it is believed that all the leading preparatory schools fitting boys for Harvard are included among those selected, which, again, fairly represent the whole number.

SCHOOL I.

In this school, according to the papers submitted by the students admitted from it, the course of instruction is the usual one. The term is four years. During the first of these four years, three hours a week are devoted to reading prescribed English books, with one hour in two weeks spent in composition. During the second year, the time spent on English is reduced to two hours a week. During the third year, this time is further reduced to one hour a week, with about one hour in each two weeks passed in writing a composition, including the correction of sentences in bad English and the study of punctuation. Finally, one-eighth part of the whole school time, in round numbers, is devoted to the study of English.

It is proper to state that in this, as in all other cases, the poorest papers only of those handed in have been used for purposes of illustration. This was necessary to accomplish the object of the Committee; for, just as the strength of a chain is measured by the strength of the weakest link in it, so, as will be seen in the course of this report, the progress of a class admitted to college is regulated by the qualification of the least prepared element in the class. In other words, the course of instruction of the whole is mapped out in view of the presence in it of an element not properly there,—the element described by Mr. Lathrop in the extract from his letter quoted in the earlier part of this report,—an element which has not received the preparatory training enabling it to go forward with advantage in a college course, and for which special provision has to be made much in the nature of a grammar-school department.

Seven papers written by students prepared in this, the first institution referred to, were handed in to the Committee, facsimiles of two of which will be found in the Appendix to this report. (Nos. 1 and 2.)

SCHOOL II.

The following paper from one of the students admitted from this institution gives a fair idea of the course pursued in it:—

“ Although I received no instruction for the entrance examination, at the school where I prepared for college, I nevertheless did considerable outside work, read the required books, and was fortunate enough to pass the English examination. The greater part of my time, however, was devoted to Latin and Greek and, as my reading and preparation for English was done wholly out of school hours, the time devoted to my other studies was ten times as much.

Occasional newspaper work and the editing of the school paper gave me some facility in writing and certainly increased my meagre vocabulary. I have a fair knowledge of dramatic literature. Judging from my work on the school paper and from essays submitted for prizes, that I was in tolerable shape to take English examination, the headmaster of the academy deemed it best for me to devote my time wholly to the classics.”

It will be noticed that the preparation of the student in this case was largely due to occasional newspaper work and the editing of a school paper. This is an experience not peculiar to the writer, but one to which the Committee desire to call attention, as emphasis will be laid upon it in another portion of this report.

Two students only presented themselves for admission from institution II., both of whom succeeded in passing the entrance examination in English composition.

SCHOOL III.

In the case of this school, according to the papers submitted, the time given to instruction in English Composition, so far as theme writing is concerned, “ varied from half an hour to an hour a week. The scholars wrote on an average one essay a week. Very often in addition to the regular work the teacher would give the scholars regular examinations, generally using the old examination papers of Harvard College. The time devoted to the study of English never fully equaled that devoted to any other study.” Two candidates only presented themselves for admission to Harvard in 1891. One of these failed to pass in English Composition; the other succeeded in passing. A single page from the composition submitted to the Committee by the candidate who passed his examination is herewith submitted in facsimile in the Appendix to this report. (No. 3.)

SCHOOL IV.

Two candidates only for admission presented themselves from this institution. The following paper submitted to the Committee by one of these students, who passed the examination, has seemed from its clearness and general excellence to merit publication in full : —

“ My preparation for the English course in Harvard University naturally divides itself into two parts, viz. : first, the work done in a seminary, second, the work done in — .

“ The work done in the preparatory school was very limited. Indeed it was almost entirely neglected. I never wrote an essay until the time of my graduation, and even that was done without any aid from the faculty. We had no regular instructor in English. So that I can truly say that I never had any direct training in English composition. We studied rhetoric ; but only as a theory. We were told what beauties of language lay buried in metaphors ; but we never unearthed any to prove to ourselves what gems were there. The students, feeling greatly the lack of the English department, organized a literary society, and we met once a week for practice in extemporaneous speaking and in essay writing. Of course, we were our own critics. I never wrote more than six essays during a three years' membership in this society. However, I did much extemporaneous speaking.

“ Whatever direct preparation I may have for the present work it really began when I entered — . Three written exercises per term were required. The remainder of the work consisted in studying the principles of rhetoric. We spent much time in punctuating sentences and in correcting specimens of bad English. Then, too, we had a reading exercise. We read Christmas Carol and Cricket on the Hearth, paying especial attention to tone and inflection. We were allowed to choose our own subjects for themes.

“ Last summer I read Webster's Bunker Hill Oration, Old Mortality, and another book. (I have forgotten the name.) I think the proportion of my English work to other studies is as one is to four.”

In this case, it will be noticed, actual practice was limited to “ three written exercises per term.”

SCHOOL V.

Eighteen papers were submitted by students prepared at this institution, one of those which send up the largest number of students for entrance to Harvard. A facsimile (No. 4 in the Appendix to this report) is presented of the first of the papers submitted from these students. The writer passed the examination.

Another of the students, who also was successful in passing his examination, writes as follows :

“The class had instruction in this study (English composition) five times a week. In connection therewith we were required to hand in written exercises at stated intervals. What these intervals were I do not know; but I am sure they were no less than a week in length. It is more probable that their length was two weeks, or possibly even one month. This referred to what is called the Junior class. During the next year one hour a week was given to English exercises. Only once or twice, however, during the whole year was this hour given to practice in English composition. On those occasions we were required to write a short article on some school matter, such an article as might be published in the school paper. In our third, or middle year, we employed one hour out of sixteen recitation hours per week in correcting bad English. During the Senior year two essays had to be written, which was all that we had to do that year.”

The following extract from the paper handed in by one of the students from this seminary has seemed to the Committee worthy of publication, as containing statements and suggestions which throw much light on the results obtained there:—

“The opportunities for correct thinking, declamation and power afforded by the debating society; and those offered for cultivation of a concise, simple, practical style, through the columns of the semi-weekly school paper. These incentives, although not offered by the school, are upheld by private munificence and school-boy enthusiasm. To my mind they are more efficacious in inspiring and cultivating a fluent and correct style in expression than the prescribed course. They afford an attractive, open, free field to the boys and they are not slow in entering it.

“Besides these should be mentioned the emphasis given by instructors to parallel readings with the studies, besides direction given to the best books and authors.

“The one weak feature of the work is, not that all the ground is not gone over, but that the actual practice in writing, correcting, and criticizing, is not sufficiently frequent and unremitting. The foundation is laid for the student, but he is not forced to actual, daily practice.”

Another student in the course of his composition writes as follows: “Professor——, the head of the—— department, has for several years been making every effort to have a chair of English established in the academy and he now seems in a fair way to succeed within the next year.” The Committee will merely remark that, judging from the papers presented by those prepared in this school, it would seem to be most desirable that the efforts of Professor—— in the direction indicated should be crowned with early success.

Two other students write as follows:—

“My Preparation in English.

“I graduated from——, but I cannot say that I had any preparation in English there, though of course I did in the other branches of

learning. All that I had to do in English at — was to write two essays of about five hundred words each. These essays were to determine about the parts at graduation.

“Before going to —, I graduated at the — High School. There, I had English twice a week, and at each of these exercises I wrote a composition. These were given back, criticized and corrected, at the next exercise. Between the exercises, we had to re-write the corrected compositions, and hand them in again. Besides these semi-weekly compositions we had to write essays every month, and they were criticized and corrected like the others. In the — High School, I think that the proportion of my English to all my other studies combined was about as one is to ten.

“I took the entrance examination in English to enter Harvard College and passed.”

“Preparation in English.

“Perfection in systems of education seems yet an impossibility. Every school has its failings; so has —. And its weakest point — to confess the truth — is English composition. No one realizes this more than the management itself. Accordingly they have this year engaged a graduate of — to direct the work in this branch alone. This ought to secure the necessary system in the study, which has before been lacking.

“All (I think) of the last class who tried the Harvard examination, passed it: but this can hardly be attributed to their preparation at —. As far as composition itself is concerned, during three years at the academy, I had to compose six pieces of English. During my first year, one composition was required and during the last one, two were expected, in order to decide the choice of commencement speakers. At one time, Prof. — started the practice of once a week devoting fifteen minutes of the Latin hour to the writing of short exercises; but owing to the scarcity of time this was done only once. During the Junior middle year some of the books required for admission to Harvard were critically read, and in connection with two examinations upon them, descriptions of certain of the characters had to be written. This is all of the work required in English composition itself, but I think we received much greater benefit indirectly from the careful choice of words which was expected in the translation of both of the classics.”

The following composition is printed in full, for it seems to give a tolerably clear and comprehensive idea of the course pursued in two institutions prominent in preparing students for Harvard: —

“I began my preparation in English composition about six years ago at — School, Boston, at which school I attended for two years and a half. I have not a very high opinion of the methods employed there in many of the subjects, but I consider that English composition was given as much attention there and as thoroughly mastered as in any preparatory school in New England.

“A subject was given out every month on which we wrote a four or five page composition. These were corrected and handed back to

us, then after we had looked them over, the instructor, a man who thoroughly understood the subject, went through them with each pupil individually, explaining the reasons for the corrections. The subjects were such as a boy of from fourteen to sixteen years of age could be expected to understand and write upon and covered as wide a range as possible. Two which I remember were, 'A Description of my Summer Vacation' and 'The —— Exhibition' in Music Hall.

"In addition to this we read every two months (as I remember it) some such book as one of Scott's novels and wrote a short abstract of it from memory.

"After leaving —— I went to ——, where the nature of things seemed to be reversed. There a great deal of attention is paid to the classical studies and mathematics, for which the school is no doubt equal to any in the country, and almost none to English composition. Things may have changed now. (The step taken by the —— Alumni offering a prize for work in English having started a very good course in that subject during my last year.) But in my three years in that school, I only wrote three compositions at the most, and at present I can only recollect two. I do not remember that these were handed back or corrected. We all felt that the subject of English composition was neglected, and were thankful when the —— Alumni brought the matter to the Faculties' notice.

"In justice to —— I must say that we had in our second year a very thorough course in Shakespeare's Julius Caesar, and in the middle year in preparation for the Harvard prize examination a lesson once a week in Hill's Rhetoric.

"I do not know the result of my English composition examination for admission to Harvard, for as I did not pass enough subjects to enter, that would not have been counted if I had passed it."

Among the eighteen papers submitted by students prepared at this institution, two, in addition to the one (No. 4) already referred to, have been selected by the Committee to be facsimiled for purposes of illustration. They will be found in the Appendix to this report. (Nos. 5 and 6.)

SCHOOL VI.

The following paper, though like the last, written by a special student who did not pass the entrance examination, is printed in full as setting forth an original condition of affairs altogether too common in the preparatory schools, together with an example of improvement which might profitably be imitated elsewhere: —

"My School work in English Composition.

"I was a student for four years in the —— High School. During those four years I was a witness to many changes in the mode of instruction in composition.

"I remember distinctly my first year's work in English. I look upon it now as a distinct failure. 'Composition day' came once a week, and it was considered the most distasteful day of the whole

week. On that day each of us had to hand in a composition on some simple subject of history or literature which we were expected to have written during the week previous. But most of us did the work the night previous to the day on which we had to hand it in. In what light the faculty held the composition work we never knew. But we knew that no one ever was 'dropped' in it, no matter how poor his work. And so it came to be considered as a course that had crept into the school work no one knew how, but it had to be done and we felt that the course counted little in the general averages.

"The next year matters improved a little. We had a new principal, also a new teacher in composition who demanded better work. The class was divided into several sections, and each section was expected to hand in compositions every two weeks. We wrote on many different lines, on matters pertaining to history, literature, nature, and ourselves. We were marked according to ability displayed. The course had a regular business standard in the school and the work had to be done.

"The next year brought a still greater change. Another new teacher of composition awaited us at the opening of the school in the fall. At the first meeting of the class we were informed that 'the work in composition must not be slighted. I have been engaged to teach the work, and I intend to teach it as it should be. If you don't do good work you'll have to take the work over again.' We looked at each other in dismay. She evidently meant business, and we soon found out such was the case. Our work was criticized in a manner wonderful to behold. Our papers were interlined and crossed with red ink to such an extent that sometimes we couldn't read the original. About every three weeks a composition from each of us was due. The line of work pursued was about the same as that of the previous year. We were marked according to our work, and our marks were always displayed in bold figures on the outside sheet where any one could read them, be they good or bad. I believe I passed with credit and was advanced to Senior work.

"In my Senior year we wrote several compositions, and then as I offered myself as a candidate for prize essay work, I was excused from the regular work. Mr. ——— each year offers prizes for historical work in essay writing. I went into the work earnestly and was fortunate enough to get second prize.

"The work in the last two years had vastly improved in the school. It had been put on a sounder basis of work. But the proportion of work done in that subject, compared to the other branches, was very small. However, the school has an excellent teacher of composition now, and the work grows better each year. It is a required study, and a student is expected to do good work or not pass."

SCHOOL VII.

Two students presented themselves for admission from this school. The following is an extract from the composition of one of them, who passed the entrance examination with honor:—

“Last year I was at the —— School, (——, Massachusetts,) where, I believe, more attention is supposed to be paid to the English branches than is the case at other schools. But I do not believe that more attention is paid to them. There we wrote about eight themes, principally on the required books. The amount of time taken by them was perhaps an hour a month, very small compared to the amount of time taken by German composition, which was about an hour and a half a week. The criticism was quite thorough.”

SCHOOL VIII.

No less than twenty-six compositions were presented to the Committee from students who had prepared at this school. One of them writes as follows: —

“The time allowed for the study of English was three hours a week in school and a reasonable amount outside. Out of the three hours more than one hour a week was spent in writing compositions. . . . The study of English was considered just as important as other studies, although it was allowed less time than either Latin or Greek. We had Latin and Greek five hours a week each.”

The system now pursued at this school is sufficiently set forth in the following compositions from among the best of those submitted: —

“My English Composition Preparation.

“At the —— School, at which I prepared, there was no specified time for English composition. We had three hours of English a week out of a total amount of twenty hours per week, but as nearly as I can remember we wrote only from twenty to thirty compositions during the year.

“We were given books to read, and sometimes we were asked to tell the story of the whole book on one or two pages of foolscap paper. Other times the instructor would come into the class-room and give a certain character from a book to write about, sometimes giving a choice of two or three subjects.

“We had other subjects to write upon, some of which were given out beforehand for preparation, while others were told when the instructor came into the room, and had to be written upon during the hour.

“We seldom knew what was coming. I remember once when we were given five minutes to think up an animal story, five minutes to write it, and then five minutes to review and correct it.

“We were often given subjects from every-day life, and sometimes were allowed to choose our subjects.

“The papers, at least my paper, always came back well decorated with red ink, and about the same system of marking the errors by letters was used as I find is used here. The criticisms were profuse, and were afterwards gone over and explained in the class, examples being taken from the class.

“With this preparation, I succeeded in passing the entrance examination in English, which was about what I had been prepared to expect.”

“My Preparation in English Composition.

“English composition has not occupied very much of my time in my preparation. Compositions have been written occasionally, but the whole number for a year would amount to only four or five.

“Composition writing is left, in the——School, almost entirely until the last year, and I believe they write one once a month. As I entered College from my second year, I cannot tell for a certainty about this.

“Last year the compositions were divided into two classes; namely, those upon which we had not prepared ourselves, and those which we had spent our out-of-school time upon.

“We had English during two hours of the week, and generally this whole time was spent in the reading of different authors. So out of twenty hours a week, English had for itself only two. And, as I have said, composition played a minor part.

“If I had finished my course, I should have had almost all the composition instruction that the school affords.

“I took all my examinations in the fall and passed in English.”

Another student, who passed with honor, after describing the course pursued in the school, writes as follows: “Personal training had a great deal to do with my preparation. I wrote acceptably for the comic papers and the daily press, a training perhaps not necessary, but yet a great benefit.”

Two of the papers handed in by students prepared in the ——School will be found printed among the facsimiles in the Appendix to this report. (Nos. 7 and 8.)

SCHOOL IX.

The system pursued in this school is the conventional system, the aim of which is to qualify the student to pass the examination in English composition required by Harvard College. It is sufficiently set forth in the following composition, selected from those submitted to the Committee:—

“Preparation for English A.

“I was prepared at——school at——. We spent most of our time on Hill’s Rhetoric, with a composition about once in two weeks. The subjects for these compositions were taken chiefly from the books required for the entrance examination. Some of these books, as ‘Lord Clive’ and ‘The Ancient Mariner,’ we read in the class; the rest outside.

“The themes were corrected in the same manner as those in English A, and were sometimes read and commented upon in the class before being handed back.

“During the last half-year we wrote themes every Saturday morning. Mr. —, the teacher, was accustomed to select ten subjects from one of the required books, and we wrote for an hour on one of these subjects.

“The time given to English was three hours a week, one third of which was composition. I passed the English examination as a whole; I do not know about the sentences and the theme in particular.”

Of the nine papers handed in to the Committee by students prepared in this school, all of whom passed successfully the English examination, one will be found among the facsimiles in the Appendix to this report. (No. 9.)

SCHOOL X.

Papers from three students, all of them special, from this school, were among those handed in to the Committee. The following gives a sufficient idea of the preparatory work there done in English, and, so far as a judgment may be based on the material before the Committee, it can be accepted generally as a not unfair account of the work at other schools of a similar character:—

“Preparatory English.

“I was a member of the class of '89, — High School of —. I entered Harvard College as a special student, therefore I passed no examination.

“The name of the school from which I graduated might and ought to imply that considerable time is spent there in the study of English, but this is not so, for the instruction that I got there in English was very meagre.

“We had little work in composition, until we reached the second class, when one hour weekly was devoted to reading themes upon subjects of our own choosing, prepared out of school. We had perhaps one other hour during the week, in which we read Goldsmith, etc. I wrote, that year, not more than five themes.

“In the first class, we also had one hour weekly for writing. This was the way that it was conducted. I would write a composition out of school and read it Monday morning. Then, the other pupils would have to write and read theirs before my turn came again, and as the class was large, it is obvious that I did little work in composition. We had two other hours a week devoted to reading Shakespeare.

“English had to bow to Latin and French. We had daily recitations in these studies, the former for four years, the latter for two. The opinion that scholars held of English was: ‘Oh, I can pass in that all right without any study.’

“We would do our work, bring it into the class and read it, and the teacher would mark us according to the improvement made upon it.”

SCHOOL XI.

Twenty-four papers were submitted to the Committee from students prepared for Harvard at this school. The system pursued is fairly represented in the following from among the best of these papers:—

“My Preparation for Harvard College in English Composition, at the —— School.

“In the —— School, where I was prepared for Harvard College, the work in English rhetoric and composition surely does not hold a very important place in the list of studies which are required.

“In regard to the number of written exercises which we had, I will state that it would be safer to reckon them in months than in weeks, as they averaged probably not over one a month.

“Our first hour Monday morning was devoted, or supposed to be, to English in some form. But very often it was taken for something else which in the mind of our instructor demanded more immediate attention. However, we quite often had exercises in punctuation, spelling, &c., but these were usually oral rather than written.

“During our last year in the school we were required to read the books mentioned in the Harvard Catalogue, and, after sufficient time had elapsed, to write a composition on some part of the work; the subject was generally selected by the instructor.

“This composition was read and corrected and finally handed back to us to see our mistakes, which we sometimes talked over with the instructor and often did not.

“In answer to the question regarding the amount of time spent in English composition, I will say that three hours a month is an ample allowance, and that the proportion of this work to our other studies was very small indeed, in fact, hardly capable of being reckoned.

“However, I succeeded in passing my English examination, as did almost every one in my class.”

“My Preparation for the English Examination.

“At the —— School, preparation for the English examination began in the first year and continued, very thinly spread out, through the course. Each year we read two or three books required to be read, and twice a year we wrote compositions on these books. Thus, for the first three years, not more than five hours a year was given to actual English composition, though of course the reading occupied some little time.

“In my last and fourth year in the school considerable more attention was paid to English by both teachers and scholars. The books we had read in previous years were reviewed, and new compositions written on each of them. These compositions were corrected by the teacher, and each scholar had his personal attention called to all bad mistakes. During the year we wrote possibly ten compositions, but surely not more.

"One hour a week was supposed to be devoted to English, but it averaged nearer one hour a month; for the English hour was often given over to Latin. A few exercises from Strong's English were read and corrected in the class; this, however, was so seldom done as to be of very little aid to a pupil. In fact it seemed that the teachers thought every one ought to pass in English, and that ability to write well ought to come intuitively to all of us.

"The proportion of time given to English was very, very small compared with the time given to other studies. This is especially true if the whole course is considered, for until the last year English was almost ignored. As regards passing the examination, every member of my class was successful."

Another student writes as follows: "The work of the third class was almost entirely devoted to reading books, required themes once a month, and no composition work. . . . Throughout the year we had no book with the exception of one on the desk. Our themes were required once a month and the English hour was Monday morning, very often taken up by some other study. I passed my examination and feel that I was well prepared for anything that Harvard was likely to give."

"My Preparation in English Composition.

"I received my preparation for college at the — School. During the first year, I studied composition from a text book, reciting on the subject twice a week. I was required to hand in a written exercise every month, the subject of which was usually taken from some book which I had read. The English work of the second and third years was much the same as that of the first.

"When I entered upon the work of the fourth year, I began to think of the preliminary examinations which were to be held the following June. The teachers seemed to have the same subject in mind, and the only hour which had been set apart for the study of English was now devoted to Algebra and Geometry.

"At the beginning of the last year I thought that English would be taken up more systematically than before; but, to my surprise, Latin, Greek, and Geometry occupied nearly all of the time. Once in two or three weeks I wrote themes, which were corrected with regard to grammar and punctuation, but not with regard to style. I was successful in passing the examination in spite of my careless training."

"My Preparation in English Composition.

"A Harvard sophomore, formerly a member of the — School, said to me not long ago, 'Do you know that fellows who come from our school seldom get an 'A' in the Freshman English course, while most fall below 'B'? I tell you the way they prepare English there is wretched.' I am patriotic, yet forcible as this statement is, I had to agree with him and say that it was 'wretched.' I think I can make the relative amount of time devoted to English clearest by a table: —

"Latin, - - -	one hour each day for five years.
"Greek, - - -	" " " " " three years.
"Mathematics, -	" " " " " three and a half years (aggregate).
"French and German, "	" " " " " two years.
"History, - - -	" " " " " one year (aggregate).

"While the English was given piecemeal in such a way as to make a course of two years in point of time, in point of relative efficacy to the other courses one quarter of a year.

"Yet of these two years even, only three quarters of a year were given to real English composition; allowing one half a year for the study of rhetoric, and the rest of the time for writing. When I give these statistics, it looks as though it was all arranged in compact form; but by 'half a year' I mean, if you picked up the pieces and put them together you could make half a year's work.

"I think I wrote about twenty-four compositions during the whole course (I completed the five years in four, thus doing away with something of what was useless). The character of the subjects varied in different years. Thus, in the first year, one of the subjects was 'The Moral Influence of Soap'; while later we wrote essays upon the different books we had read in preparation for college. This looks formidable; but any one can write *something* about what he has read; it all lay in the criticism. For, generally speaking, a composition was written and handed in to the teacher; then it was handed back with a few corrections for punctuation and paragraphing; but never for *style* or *thought* or *arrangement* or *precision*. Sometimes the meaning of the corrections was explained, sometimes not. Yet I feel that I owe it to some of my teachers to say that they labored conscientiously to make us give thought to our writings.

"We were asked about the preparatory schools. I think the grammar schools of — do more for those who are preparing for college than the School, simply because their methods are more like those here at Harvard.

"I think writing a little outside of school has influenced my English; at any rate I passed the examination for admission."

"My Preparation in English Composition.

"I passed the entrance examination in English in June, 1891. I was required to write about one theme a month, on an average, during my whole preparatory course. The themes of the first two years were on any subjects which the teachers might assign. During the last three years the subjects were taken from the books which I was required to read for my college preparation. One short hour a week, about forty minutes, was devoted to this subject in school, and about one hour or one hour and a half was necessary for study out of school. I used a text-book on rhetoric and English composition only during the first year. The relative amount of time devoted to English composition was about one twenty-fifth."

Six specimens of the English compositions presented by those admitted from this school are included among the facsimiles in the Appendix to this report. (Nos. 10 to 15.)

SCHOOL XII.

The system pursued in this school is set forth in the following paper, handed in by one of the four students from it, all of whom passed their examinations successfully. The Committee found the papers from the students prepared in — School exceptionally good; and more time, it will be noticed, is, according to the students from it, there given to English than to any other study: the work in English is almost daily: —

“ My Preparation in English.

“ The greater part of my instruction in English composition I received at — School, where I spent seven years. There we were required to write monthly themes known as ‘ compositions,’ upon subjects announced about three weeks before the compositions became due. These subjects were very varied; sometimes they were taken from other school work, especially from our history, and at other times we were given ‘ questions of the day,’ such as the ‘ Labor Problem,’ ‘ The Anarchists,’ etc., to write on.

“ Although, throughout the school, these were required but monthly, the amount required in any one theme varies, of course, with the class, and never exceeded three pages of a letter-sheet. We were, however, encouraged to write as much as possible, and those of us who became interested particularly in any subject often wrote from eight to twelve pages. These were criticized by the instructors, who not only marked errors in spelling, construction, and punctuation, but even made numerous suggestions of improvement — sometimes involving a complete change in its arrangement of a whole paragraph. The papers were handed back to be corrected by us under the supervision and further oral criticism of the instructor.

“ Besides these monthly themes, it was the policy of the school to furnish as much practice as possible in writing English, and so the teachers in other departments availed themselves, seemingly, of every opportunity for written exercises, which often were not previously announced.

“ Of course we studied grammar throughout the school and we were also drilled the last year on Prof. Hill’s ‘ Rhetoric.’

“ The training there in English seems to me especially thorough and to be deemed of greater importance, and hence more time to be given to it, than any other study. It embraced besides the above-mentioned instruction in composition, careful study of standard works of English literature, and drill in reading aloud from them, so as best to bring out the force and beauty of the style under consideration. This work was almost daily, and was supplemented by monthly abstracts of the most familiar works of noted authors.”

SCHOOL XIII.

Two papers prepared by candidates from this school, both of whom passed successfully the English examination, are printed among the facsimiles in the Appendix to this report. (Nos. 16 and 17.)

SCHOOL XIV.

Three candidates from this school, all of whom had succeeded in passing the examination in English Composition, submitted papers. One of these will be found in facsimile (No. 18) in the Appendix to this report. It sufficiently sets forth the system there pursued and the results attained.

SCHOOL XV.

One paper only was submitted from a student fitted at this academy. The Committee print it in full, inasmuch as it sets forth the system of instruction in English there pursued, — a more rational system, perhaps, than that pursued in any other of the preparatory schools brought under review : —

“ My Preparation in English.

“ The —— Academy, or as it is popularly known, the —— Academy, situated in the historical town of ——, has not for its main object the preparation of candidates for Harvard or any other college, but aims to give its pupils a ‘ liberal ’ education, such as the sons and daughters of a farming community are in need of.

“ As a consequence of this, English composition and rhetoric have a very important place in the school curriculum.

“ The studies in this school are elective, except that English is prescribed.

“ The first year after a pupil has entered this school, special attention is given to English composition. The text-books used are Hart’s Rhetoric and Miss Chittenden’s English Composition. Writing themes is thought of great importance, as the school goes upon the principle that ‘ practice makes perfect.’ English recites every day, with written exercises three times a week and sometimes even four. The subjects at first are the rewriting of bad sentences into good English, care being given to punctuation ; then the reproduction of poetry into prose or the development of some short poem into a lengthy prose narrative, special care being given to proper expression ; finally, periphrasis with the study of words and essays on any subject. This completes the work of the first year. The second year of his stay at school the pupil keeps a journal, writing about a page every day upon any subject connected with his school life. No text-book is used. The third and fourth years of his school life he has to take part in the ‘ rhetorical,’ which he very often dislikes very much to do. These rhetorical consist of speaking or declaiming pieces committed to memory, or the reading of original compositions. The rhetorical are alternated with debates in which the whole school may take part upon questions, as the McKinley Bill, etc. The rhetorical come once a week on Wednesday afternoon.

“ By the way, the recitations in English last one hour and the rhetorical occupy from two to three, — that is, a whole afternoon.

“ As all the studies, which a pupil in this school takes, come every day, it is hard to decide which of the studies is of most importance

or what relative time is devoted to English. I do not fear to commit myself, if I say that although English does not occupy any more time than Greek or Latin or the mathematics, because these are naturally so difficult that a great deal of time has to be devoted to them, yet it stands pre-eminent.

"I passed in the English entrance examination, whether with credit or not I do not know. If my theme fails to show the effect of the careful training in English in this school, it is not its fault; because I was not a regular student, nor a regular attendant, but attended it irregularly for only about two and two-thirds years."

SCHOOL XVI.

The system pursued in this school is sufficiently set forth in the following paper, submitted by one of the five students prepared in it who presented papers:—

"My English Preparation.

"The school I come from is a preparatory school. This fact must be remembered, if one wishes to understand our preparation. The aim of the school was to prepare its students for the examinations in different colleges. In order to accomplish this the more thoroughly, the exercises in English had to be adapted to the requirements of the different colleges. Columbia, Yale, Cornell, and other leading colleges require no special preparation in English; so the matter sifted down, resolved itself into a preparation for Harvard College.

"In the first place, during the Junior and Senior years in the academy, the preparation in English was made an item of greater importance than any other branch. Not that more time was spent upon it, but that proficiency in English was regarded as higher than in any other branch. Three hours per week were devoted to English, and of these three, one was given over to writing; another was devoted to the consideration and correction of the themes; while the third was devoted to literature and rhetoric.

"In the choice of subjects, although great freedom was given to the students, all the themes were confined to the works prescribed for Harvard College. If I remember correctly, the following were among the subjects last year: 'Silas Marner Reclaimed,' 'The Character of Lord Clive,' 'The Ancient Mariner,' 'The religious element in the Ancient Mariner,' 'A comparison between the Portia in Julius Caesar and the Portia in the Merchant of Venice,' 'The Alhambra and its surroundings,' 'The Character of Burley,' etc. From this list it can easily be seen that our preparation in composition aided to no slight degree in our English examination.

"The hour devoted to the correction of themes was indeed an interesting one. Our instructor attempted to allow the men to do a large share in the correction. He never demanded that a change be made, but tried by reasoning to show that some other expression would be preferable to the one used.

I distinctly recollect one occasion where I was positive a certain expression was correct, and that the whole recitation was devoted to

that one expression, until finally the matter was settled. It was in this way that our individual tastes and peculiarities were brought into prominence and that each student followed a style of his own in writing.

“During my last year at school, I had nineteen recitations a week and, therefore, about one sixth of my time was devoted to English; but as I said before, in spite of the relatively small amount of time devoted to the English branches, proficiency in English was a marked factor in determining a student's standing.

“Besides our composition work, we devoted some time to literature and rhetoric. Of the first I shall not speak, as it does not properly belong to my preparation for college. Our rhetoric consisted of a number of ‘hints’ on the different rhetorical principles, a study of the figures of speech, and as a practical test, the correction of mistakes in rhetoric and syntax. The sentences for correction were about as difficult as those in the Harvard examination. This was substantially my preparation in English for Harvard College, and when I took the examination last June I passed in my English.

“I have not attempted to give any great care to expression in the above, but merely to give an accurate account of my English preparation.”

SCHOOL XVII.

The system of instruction pursued in this school is set forth in a paper submitted by one of the nine students from it, included, either as special students or as members of the Freshman class, in English A. A facsimile of this paper will be found in the Appendix to this report. (No. 19.)

SCHOOL XVIII.

The system of English instruction pursued in this school, according to certain of the students prepared in it, is set forth in the following paper:—

“I fear that the method of instruction in English composition adopted, or fostered, in — high schools, is not one calculated to excite a great deal of admiration. As to giving a description of the course, it would be an impossibility; but I will say that the amount of written work required varies apparently with the disposition of the instructor. That is to say, there is no fixed standard as to the quantity of work to be done on the part of the student in this branch of education. Perhaps a year's course in the — High School will be the means of producing one written composition in four or five weeks.

“The character of these productions depends entirely upon the writer's natural ability. There is no discussion, no re-writing; the criticism consists merely of reading the sheet over and marking a few of the most glaring errors. When this has been done, the student's production is returned to him (sometimes) marked anywhere from 4 to 10, the grade depending almost entirely upon bare mechanical

correctness. The science of word-choice and arrangement seems to be an unknown quantity. The character of the subject is usually left to the student.

“To diverge a little, I will say that reading and spelling are practically things of the past in the — High School, and the natural result is that they are things of the future to most of the students. This neglect of the fundamental principles of a general English education, characteristic of high schools in general, began to make itself known with the introduction of advanced work in composition, and is in itself a disgrace to the name of education.”

SCHOOL XIX.

The system pursued at — is set forth in the following paper. Six compositions, among those examined by the Committee, were by students prepared at this school: —

“My School work in English Composition.

“I began my work in English composition in my first four years at —. For two years I was kept at this work, writing a composition about every two weeks. Then my English course was dropped for about a year. The following year, when I was in the fourth form, I began again reading plays, and writing compositions about every three weeks; this was kept up till my sixth form year. When in the sixth, I began regular English work: three recitations a week, and three compositions a month. The subjects at first were of a lighter nature, such as ‘My Christmas Holidays,’ ‘Football,’ ‘A Ghost Story,’ etc. In my sixth form year, however, and also in my fifth, harder subjects were given, such as the characters of different great men, and descriptions of different places, also comparisons between different English writers. All these compositions were handed back fully corrected, and with the work well criticized. Our time for these compositions was about an hour and a half in school, and two more hours to be devoted to it outside. The relative amounts of time devoted to this study, compared to the other studies, was small. But at — in all one’s studies, even in Greek and Mathematics, the English of every boy is carefully watched and corrected. This is so even on the playground. Last spring at Harvard I passed my entrance examination in English.”

SCHOOL XX.

A single student from this school presented a paper. A facsimile of it will be found in the Appendix. (No. 20.)

SCHOOL XXI.

The system pursued in this school is set forth in the following paper from among the seventeen presented by those who had then received preparatory education: —

“My Preparation in English.

“I was prepared at—— School, and received my instruction in English from Mr.—— of——. We wrote one composition each week through the year, of about two pages in length. Some wrote more and some less. We read all the required books twice, the second time in review at the end of the year.

“The subjects were of wide range. Sometimes Mr.—— allowed us the choice of two or three subjects. Two of those we wrote on were ‘Silas Marner’s return to Faith’ and the ‘Character of Burley.’ The time occupied in writing the composition was two hours, and later we had to correct or re-write it. The reading outside took about two or three hours a week.

“The criticisms were extensive and very cleverly done. A lady corrected the compositions. She was not sparing of red ink. Sometimes I would get back half a page of it, not only improving, but interesting.

“I think I devoted not quite as much time to English as I did to Latin and rather more than I did to Geometry, and I was neither efficient nor deficient in either one of these studies. I passed English, but received no honor.”

Two specimens of the results of this system will be found among the facsimiles in the Appendix to this report. (Nos. 21 and 22.)

SCHOOL XXII.

But a single student from this institution submitted a paper, and the student in question was a special. The following extract is taken from the paper as fairly indicating about the average amount of training in English Composition given in high schools, so far as any inference on this head may be drawn from the papers submitted to the Committee, which refer to more than fifty such schools scattered over a wide area of country, though, of course, mainly in New England: “My work in English composition varied in its amount, the probable average being one written essay or composition every two weeks during the last four school years. . . . We usually devoted about one hour and thirty minutes per week to the written work. . . . The amount of time devoted to recitations, mathematics, literature, political economy, etc., was about three hours per week to each study.”

SCHOOL XXIII.

But a single student, and that a special student, of those who submitted papers, had received his elementary education at this institution. The following extract from his paper is quoted for its suggestiveness. The paper as a whole was remarkably well expressed:—

“Probably my four years in business have had a noticeable effect on my writing. I have had a great many business letters to write, always under pressure, and have gotten to sacrifice punctuation, style, and clearness for brevity and lack of time, and have grown careless about the arrangement of my sentences. When I try and overcome these faults, I am apt to go to the extreme: become vague and repeat.”

SCHOOL XXIV.

A single student only among those who submitted compositions had received his elementary education at this school also. His composition is suggestive, and a facsimile of it will be found included in the Appendix to this report. (No. 23.)

SCHOOL XXV.

The system at present pursued at this academy and its results in certain cases can be studied in the compositions of two of those admitted from it to the Freshman class, among the facsimiles included in the Appendix to the present report. (Nos. 24 and 25.)

SCHOOL XXVI.

A paper presented by one of the three members of the Freshman class who had received their preparatory education at this institution is printed in full because of its suggestiveness:—

“My Preparation for the Harvard English Examination.

“I was prepared for Harvard College by the——High School. I pursued the so-called Ancient Classical course which covers four years. In the first year Latin, Algebra, and ancient History take up the student’s time, while in the second year Greek is added and Geometry substituted for Algebra. In the third year, I had some English History and Physics in addition to the regular Latin and Greek. It was only in my last year that I received any instruction in English, and to this important subject only two terms of the whole twelve terms are devoted. The nature of our work did not tend to fit us for the English required by the College. In the beginning of the year we read a little of Chaucer, and then hurried through the smaller pieces and poems of the English requirements. The rest of the time was given to Shakespeare and Milton. I believe we read five of Shakespeare’s plays and the first two books of Milton’s *Paradise Lost*.

“It seems to me that much more was said that would be done, than was actually done. We were to write a theme every two weeks, but during the whole time I handed in only two exercises and only one of these was corrected. The corrected one was on the Merchant of Venice and the other upon the Character of Lord Clive.

“As a graduation exercise I was requested to write a theme on ‘Do we hate England,’ but this I never finished, as I took sick and was forced to leave school for a month.

“These two compositions and a fragment of another were the only training I had in the whole four years.

“The following is the proportion of time devoted to my several subjects. Latin, twelve terms; Greek, nine terms; Mathematics, six terms; History, four terms; Physics, two terms; and English, two terms. German and French I studied under a private tutor and devoted about a year to each of them. In spite of my meagre preparation in English, I passed and am very glad of that.”

SCHOOL XXVII.

The following extract from a paper by one of two graduates from this school is also printed because of its suggestiveness:—

“I am sorry to have to say not only for myself, but also for the school where I fitted, that the English work of those preparing for college was done at odd moments. There was a very fine course in English in the third and fourth years at the school, when Shakespeare, Milton, Johnson, and others were studied, but I was unable to take that course because my other studies demanded so much time.

“The last step in my preparation for English *A* was perhaps the hardest, namely, to pass the English examination of Harvard. Notwithstanding that my preparation was less than that in other subjects, I passed my examination in English.”

SCHOOL XXVIII.

The following is an extract from one of nine papers handed in by those who had received their preliminary education at this institution:—

“English came five times per week first year, three times second year, three third year, and two times fourth year.

“I considered English in the High School my easiest study and the reason given by the instructor was that the requirements and examinations set by Harvard College in English were not as severe as those set for other studies.”

The following is from another composition:—

“Owing to the amount of time required for Greek and Latin we had English only twice a week in our Junior year. It was not until this year was reached, that we considered English as important as some of our other studies. English never held the position occupied by either Latin or Greek, as is shown by the fact that while we had these studies as often as six times a week, we had English only twice. But this was partly owing to the great amount of preparation required in the languages for admission to Harvard. . . . The relative amount of time devoted to English composition was about one tenth, but out-

side reading bearing upon the subject of the theme was required. The thought, however, must be our own, and this rule was strictly followed."

Among the facsimiles in the Appendix to this report will be found one paper in full (No. 26), prepared by a student fitted partly in this school and partly in School XIV., who passed his examination in English.

SCHOOL XXIX.

A paper presented by one of the four graduates of this institution, included in English A, will be found among the facsimiles in the Appendix to this report. (No. 27.)

SCHOOL XXX.

Four members of the Freshman class admitted from this school handed in papers. The paper handed in by one of the four will be found among the facsimiles in the Appendix to this report. (No. 28.) It is the least creditable of the four; but the writer would seem to have passed successfully the examination in English Composition.

SCHOOL XXXI.

The following paper, presented by the single graduate of — High School included in the present Freshman class, is submitted because of the system described in it as pursued by the private tutor who finished the writer's preparation: —

"My Preparation in English.

"The first school which had any bearing upon my preparation in English was the Grammar School at —, Mass. In this school the principal work was the writing of compositions, about one in two weeks and sometimes not so often as that. Exercises in the grammar were also an important feature of the work. In this school the amount of work was nearly the same as that in arithmetic, history, and other grammar school studies.

"In the — High School a greater amount of work was required of us; here compositions were written much oftener, usually three or four a month, while exercises to punctuate properly and to correct faulty constructions usually amounted to three or four a week. The amount of work in English was about equal with that in each of the other studies.

"The year before I came to College, I studied under a tutor who did me more good than all my previous training in English combined. At every recitation he would give me a subject and tell me to write on it for ten minutes, beside this I had to bring in a composition every recitation. I did more work in English under him than in any of the other studies."

SCHOOL XXXII.

More members by far of the Freshman class received their preparatory training in this institution than in any other of the 160 institutions represented, the papers received by the Committee from them being no less than forty-seven in number. For this reason special attention will be paid to the system pursued at —. It is described in the following papers:—

“My School work in English Composition.

“I prepared at — Academy where the English course is the least important thing in the school work.

“During the Middle and Senior years we had two compositions to write, one of these was the Life of Lord Clive.

“Some times, perhaps once or twice a term, we had a written exercise in class, on the book we had been reading. Then we exchanged papers with our neighbors, and tried to find how many mistakes each made, without the least attempt to correct them.

“The criticism we got from our instructor was hardly worthy of the name, for whenever any one asked him to explain something that had been marked as wrong, he was told to ‘look it up.’

“Two hours a week were devoted to English, but about two in two or three months to the composition.

“English was the course that had the least stress laid upon it. Mathematics, Greek, Latin, German, and French were held five hours every week, so the proportion is about ten hours of other work to one of English.

“I read the number of books prescribed for the Harvard examination, but I fear they did not aid my writing on account of having no opportunity for practicing.

“The result was that, after long hours of ‘grinding’ the night before, I ‘flunked’ or rather failed my examination in English.”

“My Preparation in English.

“When I entered the — Academy two years ago, some of the books required had been already read and these I had to make up outside. In my first year the writing of themes was very scarce. Perhaps once a month we wrote compositions on the books we were reading in class, but the attention paid to rhetoric was very slight, almost nothing compared to the work in other departments. In the Senior year practice in theme writing was increased and about every two weeks we wrote on subjects taken from the books we were reading in class and those we were supposed to have read outside. These essays were corrected and sometimes were read before the class. The subjects we wrote on were varied. The different characters, incidents, or scenes, or some time a summary of the whole work. In this particular we were allowed great latitude. I never found it necessary to devote any time to English composition outside of the class-room, nor, do I think, did the majority of the students. The relative time was very little, English being the ‘snappiest’ course in

the Academy and one which we never prepared for or took much interest in. In the examination I did not experience much trouble with the theme or the sentences and was not much surprised at passing."

"My Preparation in English.

"As I was admitted on a certificate from——, I have not taken the examination in English, although I was prepared to do so after graduating from——.

"At—— Academy, very little work in English composition is done for a student during the last two years; only one written exercise a month is required, and this is usually an outline or sketch of some book or play that the class may have read.

"The time devoted to English composition at both—— and—— cannot exceed one hour a week, or including the time spent in reading plays and books required for the college examinations, two hours a week at——.

"The other subjects occupy from thirteen to sixteen hours a week at both of these schools; so it may be seen that English has but a fifth or sixth part of the student's time in class room work.

"At—— University, there is no work at all in English during the Freshman year, and during the Sophomore year very little work is done, and the study of Greek, Latin, and Mathematics take most of the time. No preparation in English is required for the entrance examinations. During the Sophomore year some practice is gained in English by writing monthly themes, but these are very often written carelessly and no permanent good in many cases can result.

"It seems to me that more attention should be given to English composition in these two foremost preparatory schools of New England, and that stress should be laid on the quality of the work done, as well as on the relative amount of time given to the study of English, especially at——, more at—— and much more at——."

"Preparation in Composition at——.

"I think I can best explain the work in written exercises by answering directly the questions proposed by the Board of Overseers in English.

"First. What was the number and nature of written exercises? I do not believe that during my entire course the number of exercises, of whatever description, amounted to more than twelve or fifteen. In the preparatory year the written work consisted principally of paraphrasing, as laid down in Chittenden's Elements of English Composition. During the Junior and Middle years, there were a few written exercises required, generally the same in character as those of the preparatory year. During the Senior year we wrote synopses and summaries. For example, after reading Macaulay's Essay on Lord Clive, we were asked to write a brief summary of the most important incidents. When we had read Bacon's Essays, we were given several titles from the essays, and were expected to write in our own language the substance of the essay we selected. In the same manner, after reading Hawthorne's House of the Seven Gables, we were permitted to choose from several subjects, such as Clifford and Phoebe, The Old

Puncheon House, Hepzibah, etc., and were then expected to write the story as it occurred in *The House of the Seven Gables*. One young man, who ventured to make the criticism that he thought Hawthorne's depiction of Hepzibah, as an old maid, was faulty from the fact that Hepzibah did not have a cat, was ridiculed by the instructor for mentioning something foreign to the character of the composition.

"There is really no original composition required at —, and from such a preparation we enter English *A* at Harvard, where a great deal of original work is required.

"Second. What is the relative amount of time devoted to English composition? There are only two recitations in English literature per week, while the number of recitations in other branches will average five per week. I should say that the proportion of the number of written exercises to the recitations in English was about one to seventeen.

"Third. Did you pass entrance examination in English? I did."

"After graduating from the high school, I took a two years course at —, and there I received an excellent fit for Harvard in everything but English. Our course in English there took but two hours a week, while Greek and Latin each occupied four hours, with a great deal of outside work. We never looked at our English books outside of the recitation room, unless we had some poetry given us to learn; and as for essays, they were almost unheard of. I say 'almost,' for about once in two months we were called upon to write an account of the plot of some book we had been reading. Our work in class amounted to little more than reading aloud either some of Scott's poems or of Emerson's essays, and a fellow with an ordinary reading-knowledge of the English language, or in other words less cumbersome, a fellow who knew how to read distinctly, could easily get a 'B' and a good recommendation for Harvard. We had a little work in rhetoric during our Senior year, but with a teacher who made the remark in class concerning a word of doubtful etymology, 'It isn't hardly necessarily a conjunction,' our instruction was of little avail. Doubtless, our instructor was teaching us as well as he knew how. . . .

"I was fortunate enough to pass my examination in English for Harvard. But I attribute this as much to my experience as associate editor on the literary monthly, during the latter half of my Senior year, as to my instruction in English received while there."

Five compositions presented by the students who had received their preparatory education at this institution will be found among the facsimiles in the Appendix to this report. (Nos. 29-33.)

SCHOOL XXXIII.

A paper prepared by one of the two students who received their preparatory education at this institution will be found among the facsimiles in the Appendix to this report. (No. 34.) The student in question, it should be added, is a special student.

SCHOOL XXXIV.

This is one of the institutions considered most successful in preparing for Harvard. The system pursued in it, so far as English education is concerned, is set forth in the following papers :—

“ My Preparation for English Composition.

“ We were obliged, at the — School, to write a composition regularly once a month. But we also had subjects given out to us in class, on which to write short themes. Our general preparation in English was as follows :—

“ We would read the books, one after another, prescribed for College English, in class. Each student was called upon to criticise certain portions of the passages read. Sometimes, after having read a chapter, the class was told to write out during the remaining portion of the hour a summary, or more generally a criticism, on that chapter. Then again the students might be told to write a summary or criticism upon the next chapter, which was to be read at home, and brought in at the next English. These were not to be carefully written, but were to be read in class, and the class was to criticise these productions.

“ Once a month, however, subjects were given out to us to write upon one week or more in advance of the time the composition should be due. The subjects were greatly varied, but they all had some bearing on the school work in English. Several subjects were given at a time for us to choose from. We might have to write an essay on the author whose books we were reading or a criticism on one of his works. There were many other subjects of a different character, which time does not allow me to enumerate.

“ These compositions generally covered seven or eight pages. They were carefully criticised in red ink by the teacher, who used the Harvard abbreviations, were to be corrected and handed back to him. Our teacher taught nothing but English, and had our class in English three hours during the week. Latin and Greek occupied five hours a week, French, German, and Mathematics generally three.

“ I passed the English examination at Harvard College.”

“ English Composition for College.

“ My preparation for college was at the — School where there was a good deal of stress put upon English. We wrote compositions regularly, once a month, and when the compositions were corrected, they were rewritten and improved as much as possible. English, throughout the school course, came three times a week ; of this about one hour a week was devoted to English composition, both to the writing of themes and to correcting and criticising them. In the other two hours there were usually rules and examples of rhetoric given.

“ The subjects were varied : such as descriptions of places, incidents in your life, and subjects which required arguments. The aim seemed always to be to have the student use his own thoughts and expressions, and not give him subjects which he could copy from

books. Of course, near the Harvard examinations, themes were written on the books and the principal characters, like the themes we would be called upon to write.

"The criticisms were very numerous and as thorough as could be, the same mode of marking being adopted as is used at Harvard.

"The proportion of English to the other studies was: Latin and Greek from four to five times a week and the other studies from two to three times. English composition, strictly speaking, came once a week. But in the other two hours of English during the week, matters were given and discussed in direct relation to English composition.

"I passed in the entrance examination in English."

As a rule, so far as method is concerned, the papers presented by students who had received their preliminary education at this school are better than the average. A facsimile of one, as little to be commended as any, will be found in the Appendix to this report. (No. 35.)

SCHOOL XXXV.

Five papers were presented from students who received their elementary education at this school, four of whom had passed the entrance examination. A facsimile of one of these papers will be found in the Appendix to this report. (No. 36.) The writer of this paper says that at — School, "every paper we wrote from Latin or Greek," &c., was "brought as much as possible under the sway of good English." The examination paper in advanced Latin of the same student, prepared by him as a candidate for admission to College, is also printed, and will be found in the Appendix to this report (page 159). It is not suggestive of "good English."

SCHOOL XXXVI.

The system pursued in this school is sufficiently described in the following two, selected from thirteen papers: —

"My preparation in English composition at — School consisted in writing about seven compositions during the year. These compositions were simply outlines of the story in each one of the books appointed as subjects for the Harvard examination in English. I was also required at one recitation a week to correct four or five faulty sentences. The time devoted to my school work in English composition averaged, I should say, about one hour and a half a week, perhaps less, and bore about the same ratio to the time spent in the study of Greek, Latin, and Mathematics as 1 does to 8. In addition to this required school work, I did considerable voluntary work, as I was elected into a literary society and was also made an editor of the school paper. In these positions I aimed at being a universal genius,

writing, or trying to write, poetry, essays, and stories. Although I fell somewhat short of my ideal, I think that I was helped by this voluntary work more than by my prescribed work. I did not have very much difficulty in passing the admission examinations."

"The time and care given to English in preparing for Harvard College is not more than is actually required to enable the average student to feel moderately certain of passing the English examination. The time given to this study at—— School is about one hour a week during the school year. In this time a large amount of the books can be read, but each person is required to finish all the books and write a composition on each one outside of the class room. About one of these compositions is written every month. The student was permitted to treat the subject in his own individual way. In a composition on such a book as 'Lord Clive,' as a rule, the life of the man was described, as told by the author, while such a book as Hamlet was described not with regard to the plot, but the style of the work and the characters of the chief persons figuring there were told of. In other words each one wrote on such parts of each book as he thought were likely to be given as one of the subjects for the examination.

"Great care was taken in correcting these essays, and advice was given as to the best manner of overcoming the defects.

"Toward the close of the year, when the examinations were close at hand, a few hours were given to preparation for the other part of the English examination. Old Harvard papers were corrected and sentences from books were also used, but to this there was not as much time or care given as to composition writing.

"I think that all the fellows thus prepared at—— School passed their examination last spring."

The writer of another paper says that in his final year at school: "I had very little prescribed work in English Composition, but I was forced to do a good deal of it outside of my studies as I was one of the editors of the—— School monthly paper." The paper handed in by him bears in its general character evident marks of this fact.

Two facsimiles of compositions of graduates of this school will be found in the Appendix to this report. (Nos. 37 and 38.)

SCHOOL XXXVII.

Of the papers handed in nine were prepared by students who received their preparatory education at this school. Facsimiles of three of these will be found in the Appendix to this report. (Nos. 39-41.) It is unnecessary to repeat that they are not facsimiles of the best papers. They are merely intended to give an idea of that weak, because untrained, element in every class which has been referred to in the earlier portion of this report.

SCHOOL XXXVIII.

But three papers were presented by students who had been prepared for college at this school. The following, one of the three, is printed for reasons which will appear later in the course of this report. It clearly sets forth in the italicized words what, in the apprehension of the Committee, is the correct system of instruction in English Composition : —

“I come from a small private school where no set amount of regular work in any study has been done ; therefore it is hard to answer accurately the questions about my preparation.

“During the last five years I have read each year a large number of the prescribed books for the examinations of that year, and have written several compositions on subjects taken from those books. Some months I have written several compositions, others none at all. During the whole year, however, I think a good deal of work would be done.

“The preparation of English was carried out in every other subject : my translations from other languages were carefully criticised for their English ; my geometry propositions I have rewritten many times on account of poor English.

“I cannot give any statistics about the proportion of the work done on all subjects for this reason ; but I think a great deal of attention has always been paid to my English. Having only one teacher, he has been able to follow up carefully any weak points in my English.

“I passed my examination in English.”

SCHOOL XXXIX.

Four of the students included in the Freshman class were prepared at this institution. A facsimile of the paper handed in by one of the four will be found in the Appendix to this report. (No. 42.)

XL.

Among the facsimiles will be found one (No. 43), by a student who had been prepared by private tutors. It is printed as an object-lesson merely, showing how slight an acquaintance with the elements of English Composition will enable a student to pass successfully the entrance examination to Harvard College.

XLI.

Another student fitted by a private tutor writes as follows : —

“During this last year, while studying with a tutor, I handed themes in occasionally. English was allowed to go by the board, because of several other studies being more important, and because of so much time being taken up with them.

“I passed in the admission examination in English.”

XLII.

Another student, also fitted by a private tutor, who, not without justifiable self-congratulation, writes "I passed," presented a paper which will also be found among the facsimiles in the Appendix to this report. (No. 44.)

In order, if possible, to avoid reaching a wrong conclusion as to the courses of study in English and English Composition and the amount of time given thereto, both absolutely and relatively to other studies, the Committee endeavored to verify the statements made in many of the foregoing papers by reference to the printed programmes of studies in the schools or academies referred to. To a certain extent this was done; though, at the outset, serious doubt suggested itself as to how far the programmes were in practice regarded, and the possible extent to which, under pressure of time, etc., one study might be sacrificed to another. Neither did such a process of verification seem likely to affect the results. These spoke for themselves in the form and substance of the papers examined; and, in the judgment of the Committee, it mattered little whether all the statements made in those papers were or were not correct, or in accord with the programmes of the institutions the systems of which were described. It is possible, also, and even probable, that in many of the papers presented, and in several of those printed or reproduced, injustice, intentionally or otherwise, may have been done to schools or individual teachers. All names, therefore, have been omitted, as the printing them seemed calculated to draw discussion away from facts to personal controversy.

Finally, it was possible that the papers handed in, especially those facsimiles of which are submitted with this report, might not fairly present the attainments of those whose names were attached to them. To assure themselves on this point, the Committee caused the original entrance examination-books of the writers of the letters in facsimile to be hunted up, and carefully examined them. These papers showed clearly that the instructors in the English department had good grounds for cautioning the Committee that the body of papers prepared for it, and on which this report is based, were for reasons they gave "decidedly above the general average of work done by those whose names were signed to them." The Committee do not consider it necessary to increase the bulk of this report by reprinting in connection with it any considerable number of these examination papers, much less by reproducing them in facsimile; but, in order to fortify the conclusions reached, they have selected a few of them at hap-hazard

as specimens of the whole, and included them in the Appendix (pp. 159-164). Those thus selected are written translations of passages from the Greek and Latin classics. They show both the educational system pursued in the schools, and the degree of mastery of their mother-tongue possessed by those responsible for the papers; and, did space admit of their reproduction in facsimile, it would further be apparent that they are no more creditable in form than they are in expression. This body of evidence, corroborative of the statements made and the conclusions reached in this report, is still in the hands of the Committee and open to examination.

The inferences drawn from the 450 papers specially prepared for the examination of the Committee by the 1891 students in English *A* have been further confirmed by the report of the results of the examination of candidates for admission to the Freshman class in June, 1892. English Composition papers were then prepared by 414 applicants. Of these no less than 47 per cent., or nearly one half of the whole, either passed unsatisfactorily or were conditioned. In other words, it may be said that one half of the total number of candidates for admission to the Harvard Freshman class who presented themselves in June of the current year were unprepared in the department of elementary English for admission to the College. They could not write their mother-tongue with ease or correctness. On the other hand, out of the 414 applicants, but nine, or 2 per cent., were marked as passing the examination "with credit," as against 20 per cent. who failed wholly.

Basing a judgment on the body of evidence thus presented, the conclusion which in the opinion of the Committee must be reached is that the system of instruction in written English now pursued in the preparatory schools is, almost without exception, limited to the requirements for admission to college. In that system, as developed in the material examined by the Committee, can be found only here and there the trace of an idea that the end of preparatory instruction in English Composition is to enable those taught to write the English language easily and well, so that the writer may be able to use it as a tool familiar to his hand, as speech to his tongue, in the further process of education and in the subsequent pursuits of life. The Committee cannot speak of other departments, but in the matter of English Composition the scholar in the preparatory school receives, indeed, nothing which can with any propriety be called an education: he is trained to pass a given examination; that and nothing more. The present system, therefore, is radically defective. The difficulty also, so far as your Committee is advised, is by no means confined to the advanced schools which fit for college. It

permeates in another form the whole American grammar-school system. Some years since, for instance, in the course of the examination of certain schools in the country towns of one of the counties in the immediate vicinity of Boston, the examiner, an official of the State Board of Education, made the usual inquiry of the scholars:—"What is the object of the study of English grammar?" The answer of the scholars was immediate, that it was "the art of reading and writing the English language correctly." The examiner thereupon told the members of the class in question that he wished them, having then studied grammar for several years, to show what the results of their instruction had been by at once sitting down and writing to him an ordinary letter asking for employment,—such a letter as they might, and, indeed, certainly would, be called upon to write at some time in subsequent life. The teacher of the school promptly interfered, stating that the test was one of a most unheard-of character, and that, in justice to himself, he objected to having his scholars subjected to it,—“They had not been taught in that way!”* In other words, the children in this school had been taught to parse, as it is called, and to repeat after the manner of parrots certain rules as to gender, and subjects and predicates, and to distinguish orally parts of speech. They had never had any practice to enable them to make use of their knowledge; and so they could not compose a letter of the most ordinary character, or, indeed, express a thought in writing.

The course now pursued in the classical academies fitting for Harvard would seem to be defective in a way only slightly different from the foregoing. The theory is, and long has been, that the proper way to learn to write English is to translate orally Greek and Latin. One great object of the study of the classics undoubtedly is to perfect the student in the use of his native tongue. Meanwhile, in not more than two instances do the preparatory schools, the methods of which have been described in the papers submitted to the Committee, seem to have adopted the ordinary and apparently obvious practice of causing the students to do two things at once:—that is, to translate their Greek or Latin and learn to write English simultaneously. It goes without saying that the classic, as compared with modern languages, are in their modes of expression much the more concise. An obvious way of acquiring the familiar use of good concise written English would, therefore, seem to be to compel students, as a daily exercise, to make written translations of portions of those Greek or Latin authors in the study of which they are

* Report of Examination of Scholars in Norfolk County, in Forty-third Annual Report (1880) of the Massachusetts Board of Education (pp. 132, 146, 158).

engaged; but, so far as the systems in vogue in the schools which prepare for Harvard College are concerned, the papers printed in the Appendix (pp. 159-164), while a sample only of the similar papers in the hands of the Committee, show conclusively that in America, under the educational systems prevailing in the preparatory schools, no attention whatever is paid to the rendering of Greek or Latin into concise written English. Now, as forty years ago, the reflex influence on the student's English of translating Latin or Greek into the mother tongue seems, when subjected to a practical test, to amount to nothing.

Accordingly, if the great mass of papers examined by the Committee can be accepted as evidence, the rule seems to be almost universal that the difficult work of writing the mother-tongue is to be taught to a sufficient degree by having an exercise of an hour each month, or possibly an hour in each fortnight, devoted to it.* So far as writing

* "The work done in the preparatory school was very limited. Indeed it was almost entirely neglected. I never wrote an essay until the time of my graduation, and even that was done without any aid from the faculty. We had no regular instructor in English. So that I can truly say I never had any direct training in English composition."—p. 123.

"During the Senior year two essays had to be written, which was all that we had to do that year."—p. 124.

"All I had to do in English at — was to write two essays of about five hundred words each."—p. 125.

"'Composition day' came once a week."—p. 126.

"The amount of time taken by [themes] was perhaps an hour a month."—p. 128.

"The whole number [of compositions] for a year would amount to only four or five."—p. 129.

"A composition about once in two weeks."—p. 129.

"It would be safer to reckon [the written exercises] in months than in weeks."—p. 131.

"Twice a year we wrote compositions, . . . not more than five hours a year was given to actual English composition."—p. 131.

"One hour a week was supposed to be devoted to English, but it averaged nearer one a month, . . . until the last year English was almost ignored."—p. 132.

"When I entered upon the work of the fourth year . . . the only hour which had been set apart for the study of English was now devoted to Algebra and Geometry."—p. 132.

"We had compositions every three weeks."—Facsimile No. 19.

"One written composition was required from each student every four weeks."—Facsimile No. 20.

"One written composition in four or five weeks."—p. 137.

"We wrote compositions once a week, the time for the composition was one hour."—Facsimile No. 22.

"One written essay or composition every two weeks."—p. 139.

English is concerned, therefore, the grammar-school theory would still seem to be the one enunciated by Dogberry some centuries ago, that "to write and read comes by nature"; while, in the collegiate preparatory schools another, not very dissimilar theory obtains, under which the scholar who passes hours each day in the oral translation of Greek or Latin authors, is supposed, when a pen is put in his hand and a sheet of paper before him, through some mysterious mental sleight-of-hand, to apply without practice his familiarity with the classics to the work of English Composition, — an educational process which is in fact calculated to produce the desired result in much the same way and just about as rationally as that adopted by the gentleman who, proposing to discuss Chinese metaphysics, read up in the encyclopædia under the two heads of China and Metaphysics, and combined his information.

Satisfactory results, except perhaps so far as getting boys through an examination and into college is concerned, cannot be expected from such a method. Its crudeness is apparent; it is in no sense education.* Indeed, there is not an instructor in any one of the academies, the systems of which have been described in the papers submitted to the Committee, who would not receive with derision the mere suggestion that the process through which instruction in English Composition is imparted should be used in the acquirement by a boy of a reasonable degree of facility in any outdoor game or form of amusement. To write English correctly and with ease is something not quickly or easily to be acquired. It is a good deal more difficult to acquire than, for instance, a fair degree of proficiency in the games of base-ball or lawn-tennis, or than riding on

"It seems to me that much more was said that would be done, than was actually done. We were to write a theme every two weeks, but during the whole [four years] I handed in only two exercises." — p. 140.

"The English work of those preparing for college was done at odd moments." — p. 141.

"I considered English my easiest study, and the reason given by the instructor was that the requirements and examinations set by Harvard College in English were not as severe as those set for other studies." — p. 141.

"About one in two weeks, and sometimes not so often as that." — p. 142.

"During the Middle and Senior years we had two compositions to write. . . . Sometimes, perhaps once or twice a term, we had a written exercise in class." — p. 143.

"Perhaps once a month we wrote compositions." — p. 143.

"About once in two months we were called upon to write an account of the plot of some book we had been reading." — p. 145.

* "This neglect of the fundamental principles . . . is in itself a disgrace to the name of education." — p. 138.

a bicycle or sailing a boat, or than skating or swimming. Yet nearly every boy from the academy can do some one at least of these things with ease, and a degree of skill calculated to excite admiration. How is this facility acquired? It certainly is not acquired by studying rules in treatises, or by listening to lectures on curves, equilibrium, buoyancy of bodies or science of pitching and batting. The study of underlying principles is here discarded in favor of practice; and the practice is not at the rate of an hour in a month, or even an hour in two weeks, — the mere suggestion of such a thing would excite derisive surprise, — but it is daily and incessant. It is only through similar daily and incessant practice that the degree of facility in writing the mother-tongue is acquired which alone enables student or adult to use it as a tool in his work, — the way in which it ought to be used in the course of a college career. It is there not an end; it is an instrument.

What is English Composition? It is the art of writing the mother-tongue. Not infrequently it is said that certain persons have a natural facility in composition, while others are unable to acquire it. Undoubtedly, the power of composing, like everything else, is acquired by some much more easily than by others. But it is, in the judgment of the Committee, little less than absurd to suggest that any human being who can be taught to talk cannot likewise be taught to compose. Writing is merely the habit of talking with the pen instead of with the tongue. People are apt to forget that facility in talking is acquired only by incessant practice, — practice daily and hourly pursued from infancy throughout life. If children were taught to talk as the scholars in our schools are taught to write, what facility of oral utterance would they ever attain? Sitting in dumb silence, with the exception of one hour a month, or, in the schools disposed to be more thorough, one hour in two weeks, — as is now the case with written utterance, — they would ultimately speak English with about as much fluency and about as correctly as the average American college graduate now speaks French or German. On the other hand, if, as part of the necessary school discipline, the scholar were compelled to use his pen instead of his tongue for one or two hours a day, what skill in composition would he not attain? What he wrote would, it is true, probably not repay reading, just as what he says is, as a rule, not worth listening to; but that, as a result of practice, any youth could be trained to express himself in writing with as perfect an ease and facility as he does in speaking, cannot well be gainsaid.

This would seem to be obvious; and yet, judging by the papers printed or quoted from in this report, such a method would seem in

hardly a single case to enter into the recognized curriculum or system of any one of the scores of schools and academies which now undertake to prepare youths for entrance to Harvard College.

What is the result? That result can be studied in the papers and facsimiles submitted as part of this report. There are eight printed papers and forty-two facsimiles, — the facsimiles being nearly ten per cent. of the whole number of papers handed in. In the judgment of your Committee the writer of no one of those forty-two facsimiles had received adequate, or even respectable preparatory training in a branch of instruction undeniably elementary, and one accordingly in which a fair degree of excellence should be a necessary requisite for admission to a college course; for no young man who has not acquired a certain facility in writing his mother-tongue is in condition to derive advantage, such as he should derive, from such a course: that is, he cannot use a tool necessary to doing the work he has in hand to do.

The College, consequently, instead of being what its name implies, — a seminary of higher education, — becomes, in thus far, a mere academy, the instructors in which are subjected to the drudgery of teaching the elements. On the other hand, the remedy is within easy reach. At present a large corps of teachers have to be engaged and paid from the College treasury to do that which should have been done before the student presented himself for admission. While teaching these so-called students to write their mother-tongue, these instructors pass years correcting papers a mere glance at which shows that the present preparatory training is grossly inadequate.

As a result of its inquiries, therefore, and on the evidence set forth in this report, the recommendation of the Committee is distinct and emphatic, — it is that the College should forthwith, as regards English Composition, be put in its proper place as an institution of advanced education. The work of theme writing ought to be pronounced a part of the elementary training, and as such relegated to the preparatory schools. The student who presents himself for admission to the College, and who cannot write the English language with facility and correctness, should be sent back to the preparatory school to remain there until he can so write it. The College could then, as it should, relieve itself of one of the heaviest burdens now imposed upon it, while those admitted to College would be in position to enter immediately on the studies to which they propose to devote themselves; and if, during the College course, they take English Composition as an elective they should pursue it in its higher branches, and not, as now, in its most elementary form.

Presumably it may be urged by those in charge of the preparatory schools that the requisites for admission to the College have been now so raised that the schools cannot, with due regard to other and more necessary work to be done, devote more than an hour a month, or, at most, two hours a month, to a branch of instruction so crude, so unimportant, and so easily self-imparted as English Composition. The answer to this objection, if it is made, is obvious and conclusive: written English, like spoken English, must be taught as an incident, and not as an end, — collaterally. Exercises, especially in translating the classics or books in foreign tongues, should be in writing, as well as oral, and the student would thus acquire by daily practice a facility which he never can by any possibility acquire under the time-wasting systems now in general use. The Committee have called attention by the use of italics to the statement of one student that in the “small private school” in which he was fitted for College — “the preparation of English was carried out in every other subject; my translations from other languages were carefully criticised for their English; my geometry propositions I have rewritten many times on account of poor English.” The Committee see no reason why this most rational system thus said to be applied in one school should not be applied in all; nor does it seem any act of hardship so to alter the present tests for admission as to compel the adoption of such a system.

The Committee recommend that a sufficient number of copies of this report be printed for the use not only of the Board of Overseers, but of the Faculty of the College, and the instructors in the preparatory schools. They would further recommend that steps be taken in relation to the standard of English Composition required for admission to our colleges which shall compel the preparatory schools to change their present systems, and raise the standard to the required point. While the Committee are confident that this result could easily be brought about, the only injury which, apparently, could ensue would be to keep out of college, possibly for one term, a certain percentage of young men whose presence there now acts as a mere drag or hindrance upon those more adequately prepared.

All of which is respectfully submitted.

CHARLES F. ADAMS,	} <i>Committee.</i>
E. L. GODKIN,	
JOSIAH QUINCY,	

APPENDIX.

Specimen examples of written translations in advanced Greek and Latin, from the examination papers of candidates for admission to the Freshman class, June, 1891. The passages translated are from Cicero's speech for Cornelius Balbus, and from the Iliad of Homer.

LATIN.

No. 1.

“Therefore, for these reasons he was given over from the state by Cnaeus Pompey. The accuser does not deny this, but blames it. Thus they wish the fortunes of a perfectly innocent man, and the deed of a most excellent general to be condemned. Therefore the life of Cornelius, the deed of Pompey is brought (called) to trial. You grant that this man was born of a very honorable family in that state in which he was born, and from his youth up laying aside everything else, he spent his time in our wars, and with our commanders, and was absent from no task, no siege, and no battle. All these things are not only full of praise but also the peculiar traits of Cornelius, nor is there any blame in these things. Whence therefore is the charge? Because Pompey gave him over from the state. A charge against this man? Surely least of all, unless honor is to be considered a disgrace. Against whom therefore? In actual fact against no one, but in the argument of the accuser against him alone who did the giving. If he led on by influence had gained over by reward a less worthy man, nay even if a good man, but not so deserving: if, finally he said that something had been done not contrary to what was allowed, but contrary to what was fitting, nevertheless all blame of this kind, ought to be rejected by you, O judges. Now indeed, what is being said? What does the accuser say? That Pompey has done what was not allowed him? This is more weighty than if he said that that had been done by him which was not fitting. For there are some things which are not fitting, even if they are allowed. But whatever is not allowed, certainly is not fitting.”

No. 2.

“Therefore, for those reasons, he has been given the citizenship by Cnaeus Pompey. The complainant does not deny that, but demands it back again; thus they wish the fortunes of a most innocent man and the deed of a most eminent commander to be condemned. There-

fore the head of Cornelius and the deed of Pompeius are called to judgment. For you acknowledge that my client was born of most honorable rank in the city in which he was born; and that from his boyhood he has left all his own business and, with our commanders, has been engaged in our wars, and that he has been ignorant of no toil, no siege, and no battle. These things are all not only full of praise to Cornelius, but also due to him, and there is no accusation in them. Where, then, is the accusation? That Pompey gave him the citizenship? Pompey's accusation? Least of all, unless ignominy is to be considered an honor. Whose then? In truth no one's: it is at the instigation of the complainant, and of the man who gave it. But if he influenced less by favor, should bestow a reward upon a worthy man, nay even if upon a good man, but not so deserving a one; if, finally it should be said that something had been done not contrary to what is allowed, but contrary to what is right, nevertheless, Judges, all such taking back ought to be rejected by you. But now what is said? What says the complainant? That Pompey has done that which he was not allowed to do. And this is more serious than if he said that that had been done by Pompey which ought not to have been done. For it is something which ought not to be done even if it is allowed. But whatever is not allowed certainly ought not to be done."

No. 3.

"Thus he was given the freedom of the city a Cn. Pompey for these reasons. This, the accuser does not deny, but takes up; thus they wish to condemn the fortunes of a most innocent man, and the deed of a most preeminent general. Therefore, into court is called Cornelius, (the head of C.) the deed of Pompey. For you concede that this man, in this state in which he was born, was born in a most honorable position, and that from an early age, having put aside all his own affairs, had been concerned in our wars, with our generals, that there had been a shunning of no work, no obstacle, no battle. These things are not only full of praise for Cornelius, but they are his own, nor is there any crime in these things. Where forsooth is the crime? That Pompey gave him the freedom of the city. Is this his crime? Too little, unless honor must be thought ignominy. Forsooth whose is it? By the true affair of no-one: by the action of the accuser, of that one who gave the freedom of the city. Who indeed, if heaped with favors, would have the less conferred the reward on a suitable man, so that even if it was not a good man, but thus it was not merited: if next it was said that something was done not against him and was allowed, but against him and allowed, nevertheless all

blame of this kind must be refuted by you, judges. Now indeed what is said? What says the accuser? What is of more importance than that if he said it was done by him, that which ought not to have been. For there is something which he ought not, even if he is allowed. That which is not allowed, certainly ought not to be."

No. 4.

"For these reasons, therefore, he was enriched by the state of Cneus Pompeius. This the accuser does not deny but claims; so they wish to condemn the fortunes of a most innocent man, the deed of a very famous general. Therefore the head of Cornelius the deed of Pompey may be called into court. You will allow this one to have been born in a most respectable station in this state in which he was born and from his very youth, leaving all his affairs was trained in our wars, with our generals was experienced in no labor, no uprising, no battle.

All these (wars) were full of praise and flatteries of Cornelius nor was there any crime in these affairs. Where therefore is the crime? Because Pompey enriched him with the state. The crime of this one? Least of all unless honor must be thought base. Of whom therefore? The truth of nothing by the act of the accuser who enriched this one. Who if having been lead on by gratitude should help the less worthy man with a reward even if a good man but not so worthy.

If in short anything should be ordered done not on the contrary as he allows but as he ought (to do) nevertheless every claim of this kind Oh Judges should be repudiated. Now in truth what is said? What does the plaintiff say Will it not have been permitted him to do what Pompey has done Which is more grave than this he said was done by him which did not behoove him (to do)

For there is something which he ought not to do even if permitted. Whatever in truth does not permit certainly he ought not to do."

No. 5.

"For these reasons therefore he was presented with citizenship by Cn. Pompey. The accuser does not deny that, but seizes upon; thus they wish the fortunes of a most innocent man, the deed of a most illustrious commander to be condemned. Therefore the life (head) of Cornelius, the deed of Pompey is called into trial. For you grant that this man was born of very honest family in that state in which he was born, and that, as he grew older, his own affairs having been

left he was engaged in our wars, with our commanders, and that he was skilled in no labor, no blockading, no battle. All these things are both full of praise and appropriate to (lit. of) Cornelius, and there is no charge in these matters. Where, therefore is the charge? That Pompey presented him with citizenship. Is it the charge of this? Very small, unless shame must be thought honor. Of what therefore? The thing being true of no one: (it being) the action of the accuser, of him only who presented it. Who, influenced by favor, he had made the man less favorable by reward, nay even if he had made him a good man, but not so worthy: if at length, anything could not be said, and was not said against the deed, but ought to have been said, still every arrest of this sort ought to be looked upon with scorn by you O Judges. But what is said now? What says the accuser? Does he say that Pompey did what was not allowed him to do? Which is more serious than if he said that that was done by him which he ought not to have done. For there is something that is not proper even if it is allowed. But whatever is not allowed is certainly not proper."

GREEK.

No. 6.

"But up, if you are courageous and help the sons of the Greeks cooped up from being destroyed by the din of the Trojans. You will be grieved afterwards nor to any extent does the priest find evil in the sacrifice.

But much before do you consider how you shall ward off an evil day from the Greeks.

O my lord, so your father Peleus commanded you on that day when he sent you from Phthia to Agamemnon.

"O my child, Athene & Hera will give the reward if they wish, but do you curb your great mind in your breast. For kindness is better. Withdraw from mischief making strife in order that both young and old of the Greeks shall honor you the more. So commanded the old man and you heard him. But yet now also stop, and forbid grief-causing strife.

Agamemnon will give worthy gifts to you ceasing from your wrath. If you do, now hear me and I will relate it to you, such gifts Agamemnon promised in the tent, seven tripods untouched by fire, and ten talents of gold and twenty copper cauldrons and twelve strong horses prize winners, who win prizes with their feet. He would not be poor to whom these things become nor lacking gold cause of strife, such prizes the horses of Agamemnon win."

No. 7.

“Moreover Achilles lamented the father and then again Patroklos, and the lamenting of them went (arose) throughout the house. Moreover when godlike Achilles had satisfied himself with weeping, to him from his hair came sweat and from his limbs and immediately he rose from his seat and took the old man by the hand gray beard and gray head and and addressing him he spoke winged words: “O wretched one indeed you have many bad things in your heart. How did you endure alone to go to the ships of the Achaeans in the eyes of a man who killed for you many and noble sons? There is a heart of iron to you. But come sit down on your chair and let us allow sorrows to lie firmly in our hearts although grieving. for not any deed is of chill weeping for thus the gods allot to wretched mortals to live sorrowing, but they themselves are without care.”

No. 8.

“But rise, if you have been here and heard the tired sons of the Greeks speak, under the din made by the Trojans. Anger against yourself will be put aside nor is it possible to find and remembrance (knowledge) of the evil performed, or anger; but consider much first in order that you may not ward off the evil day from the Trojans.

Alas, surely your father Peleus gave commands to you on that day when he sent you from Phios to Agamemnon. (Saying) ‘My child let Athenae and Hera give offence if they wish, but you keep a cheerful heart in your breast; for kindness is better. But withdraw from evil planning wrath in order that the sons and old men of the Greeks may honor you more.’

Thus the old man (your father) ordered, but you did not obey. But yet even now stop, and desist from anger, leaving grief to your mind. But Agamemnon is going to give worthy gifts to you if you cease from your anger. But if you do, hear me and I will tell you, what sort of gifts Agamemnon has kept for you in his tents; seven beautiful tripods, and ten talants of silver, and twenty beautifully wrought garments, and twelve strong prize bearing horses, who carry costly trappings on their heads nor would a man be poor, who had such things nor would he lack much prized silver, so many beautiful trappings do the horses of Agamemnon wear on their heads.”

NOTE.

In the following facsimiles the papers of the students are reduced to one half of their original size. This reduction, as is usual in such cases, materially improves their general appearance. In examining them this fact, together with the statements on page 120 of the present report, should be borne in mind.

No 1. p 121

My Preparation in English Composition before
I came to Harvard.

Before I came to Harvard College, I attended the Academy in Massachusetts, where my study of English composition was in charge of Mr. ^a gentleman who is very particular in all rhetorical points. questions.

In my first year at that school and in fact, during my whole course there, the number of ~~written~~ exercises written in a week was never more than two, and sometimes only one, while at one time in the third year my class dropped the study of English altogether. So I may say that the number of exercises written in a week was one.

~~After~~ Each exercise ~~was~~ handed back to us, ~~with~~ after our instructor had marked the mistakes, both rhetorical and grammatical, and sometimes the themes were read in the class, and the different points, good or bad, made clear to us. Besides this, we sometimes had to rewrite our themes, correcting

the mistakes and improving as much as we could.

The time which we devoted to English composition was therefore, not more than two hours a week, without correcting the time which was necessary for reading the books out of which our subjects were taken. We always wrote on some subject taken from one of the books, which are required to pass the Harvard Examination in English, never taking subjects from every day life or the events of this period.

No 8 The amount of time which we devoted to English was small compared with that devoted to Latin & Greek and smaller than that devoted to science.

But although I had doubts of my ~~pass~~ ability to pass the English examination for admission to Harvard, I got through it all right though I did not know it in the middle of the summer.

No. 2 p 121

My Preparation for English

I was prepared Acad-
emy and took the examination there
passing it.

We seemed to have had no regular number of written exercises per month, but I think we averaged about three. The subjects of these themes were taken from the more interesting parts of the prescribed books, and were usually written within the recitation room, an hour being allowed us in which to finish them.

The time devoted to English was one hour a week with outside reading, while that devoted to English Composition was only about three hours a month. English Composition took but a small proportion of our time most of it being devoted to the other studies ^{required} for the admission examinations.

No. 3. p. 122.
Preparation for English A

My preparation was carried on by
in class for boys.
preparation

consisted in reading the books, and being prepared to write compositions on any subject taken from them. I had to write two of these essays per week, and once every two weeks, to have an oral examination on the book I had been reading.

The time devoted to the English, including the time spent on Rhetoric and Essays, was about four hours per week. The relative amount of time devoted to English and Latin was as three is to four.

The reading of the books occupied more time than the other English preparation, because some of the books, as "Old Mortality" and "House of Seven Gables" had to be read three or four times before I could remember all the important points

I took the English examination last June and succeeded in passing.

My preparation began in the winter of 1891, and continued until a few days before the examination. This last year was the only one in which I had any direct preparation for the examination. But, ever since I began to go to school, I have written one or more compositions per week. The subjects were various. I wrote sometimes of a place I had been to, or of a book I had read, or of any subject my teacher thought best.

4 1/2.

No. 4. p 129

My Preparation in English Composition

I received my preparatory
education at Academy

There was not much
attention given to English there,
being behind the
times in English and compulsory
church and chapel. In three
years at

I wrote four
compositions. I chose my subjects
from ten or a dozen furnished by
the teacher. I remember two "John
Hampton" & "The search for truth"
The relative time spent on Eng-
lish composition was even less as
special attention is given to Greek
at Latin in that institution which
I believe is considered the best in
the country.

No. 5. p 126

My preparation for English H.
was ~~done~~ made in Academy
and in College.

Very little work in composition
was done at where I
was there we had an hour
a week assigned to English
but it consisted more in read-
ing than in writing Eng
although we were occasionally
asked to take notes on lectures
given by the instructor Outside of
the class room all the students
were asked to make contributions
they saw fit to the school
publications

In about
five weeks in the year is
devoted to English the work
being confined to Themes on
English history and exercises
being written by each member of
the class and delivered.

No - 6 p. 126

My English Composition.

During my course at
academy, the
school at which I prepared for
college I had very little
composition work

I was required to write one
composition of about four
hundred words, once in the
school year.

The subjects given were mostly
descriptive, such as, describe
a fire. I had eighteen
hours a week and one hour,
every two weeks, was given
to the reading of Shakspeare and
other books, so as we might



see the style of writing.

The criticisms of the composition were in writing on the composition.

I studied Heart's Rhetoric for a half a year. I had it one hour three times a week.

I did not take the examinations.

No. 7-129.

My Preparation in English for College.

I was prepared for College at the
School. At the School we read quite
a number of books such as Silas Marner, The
House of the Seven Gables, Lord Clive in India,
Webster's Bunker Hill Oration, Quentin Dur-
ward, The Alhambra, etc.

After we had finished reading a book we
were given a subject from that book on which
to write in the class.

In addition to this composition work, about
once a month we were given a subject such
as to relate some experience we now had with
an animal on which to write immediately ~~for~~
from one to two pages of theme paper.

We devoted three hours a week to English,
one hour of which was devoted to composition.
This made our composition work amount to
about one-fifth as much as our Latin or
Greek work amounted to.

By following this routine three years
I was enabled to pass my entrance examina-
tion in English for College.

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No 8-p. 129

My Preparation in English

I am happy to state that I succeeded in passing the English examination.

I received my training in English at the School, where we wrote about one composition a week.

The subjects of these compositions varied; sometimes we wrote about the books we had read in our English work, sometimes on a subject chosen by the instructor, and now and then on a topic selected by ourselves.

On the average we spent about three quarters of an hour a week on compositions, sometimes but not often more. The relative time devoted to English was small. In comparison with the amount of work we were expected to do, the time given was very short.

No 9. p. 130.

Preparation for Composition

Most of my preparation for writing English composition was done at School in

For subjects on which to write selections were made from books which we had previously read. These compositions were written in class in forty minutes each. These were handed in and when corrected were returned to us to be rewritten. We rewrote these exercises until they were satisfactory.

At other times our teacher would read short selections of prose or poetry to us and make us rewrite them in fifteen or twenty minutes in our own words. Sometimes the selection would be read over two or three times before we began to write.

We devoted about four hours a week to this kind of work in school and for outside work ~~we~~ we read the various books, upon which we



were to write besides doing some of
the rewriting. This was as much
time as we spent upon any one
study.

I passed my entrance examination

No-10-p-133.

My Preparation in English.

I am a regular student of Harvard University, and passed my admission examination in English.

I graduated from the Latin School last June. At that school they do not give nearly so much study to English, as to Greek or Latin, I think the proportion is about as one is to twelve, for they are supposed to have English, one school hour a week, but very often that hour is taken for something else.

I should say the number of written exercises, were about four or five a year for the first four years, and about twelve for the last year. The subjects, were generally upon some portions of the books that were required by the College to be read

Instruction in English at the Latin School

2nd. yr. During the second year at this school, we learned a number of sayings from Cowper, Whittier, Bryant etc.; also, a number of poems, such as Longfellow's, 'The Bridge'. What benefit this was, I do not know for we were not examined on them and have forgotten all. I think the Eng. exercises were held once a week 1 hour.

3d. yr. Study of figures of speech, as, metaphors etc.
 " " some of Shakespeare's plays, as, Julius Caesar. Time - 1 h. a week.

4th. yr. We read several books, such as, 'The House of the Seven Gables', 'Silas Marner', 'Old Mortality', etc.
 Time - 1 h. a week.

5th. yr. We read again the same books, that we read during the 4th. yr. We studied one small book, treating of bad forms of speech, position of adverbs etc.

To sum it up, we read about ten or twelve books in 4 years. Plenty of criticism. About one twelfth as much time in Eng. Comp. as in Latin or Greek; one sixth as much as French and History or History and Geometry

My Preparation in English.

I do not like very well to run down the preparation in English of my own school; but it certainly is true that English was very much neglected there. I passed, as did the majority of those who came from the school, but but it was because we had absorbed some knowledge of English from in spite of the lack of attention given to the subject at school, rather than because of any assistance ^{we} they had obtained there. 15

It would be easier to tell how few compositions were written in a year than to tell how many were written in a week. I suppose we wrote about eight or ten compositions during the year, on subjects selected from the books assigned by the college. These compositions were corrected and returned.

On the programme of the school there was one recitation period a week, of forty minutes' duration, assigned to English. This

period was generally stolen
for Latin. I should say that
the time given to English
was to the time given to other
subjects as one is to one
hundred thousand.

Nov 13.th 1883.

For the last five years I have been studying in the Latin School of this city, and so received all my preparation in English composition there. It is well known that this school ranks very high among the academies which prepare students for college, but it has always seemed to me that English has been neglected in the school.

Only forty five minutes a week was assigned for the study of English composition, and part of this time was often taken for other work. Once in six weeks we were given a book to read outside of school, and then were asked to write a composition on one of the scenes or characters from the book. This comprised

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all our work. I should think that the proportion of English composition to our other studies was about one sixth. We spent at least five times a week on Greek and Latin and more than an hour on English. Notwithstanding this meagre preparation most of the scholars passed the English examination for admission to college. I had to do most of my studying in the last week before the examination, as I had neglected to read several of the books assigned. However I succeeded in reading most of the books and passed the admission examination with honors.

No. 14, p. 133

Preparation for English Composition.

I was prepared for college at the Latin School. There the attention paid to English composition, or in fact English of any kind, is very small. Up to the last year I can hardly say that we studied English composition. The first four years in the school I don't think we averaged more than five hours a year on written work. The first year we studied rhetoric two hours a week and had one examination on it. The next year we had English one hour a week, sometimes reading aloud and sometimes studying rhetoric. All our compositions were based wholly on subjects taken from books that we had read, and this was all that was done in composition. The last year we spent a little more time on it as we reviewed the books we had read and read a few more. When our compositions were handed back all the misspelled words were

underlined and the mistakes in punctuation were marked. Then the teacher would call us each separately and explain our mistakes and point out to us how we could improve it at various points. The proportion of time spent on English composition in comparison with the time spent on any other of our studies was very small. You would almost think that the teachers expected you to know English thoroughly without studying it but very little indeed. I passed the entrance examination in English.

No-15-p-133.

Regular Freshman.

I passed in English

All through my course, I had English in some form on Monday for one hour.

In the first year, this usually consisted in reciting a short poem prepared out of school.

On the other ^{Mon-} days, perhaps five during the

⁷⁴ Some of the subjects were foot-ball, Mechanics fair, a walk that you had taken. I was required to write a composition on some subject* given out beforehand. In my second year, some one of the required books, Daniel Webster's Speech and the plays of Shakespeare, was read and criticized by teacher and scholars.

In addition to this, compositions were written on subjects taken from the required books. The whole book was read out of school and then a choice of one from four or five subjects was given.

In the third year, Macaulay's, Lord Helive was read and we prepared synopses on the parts assigned to be read out of school. This lasted only for a month and a half or two months. The rest of the year we had absolutely nothing in the way of English except conversation.

The last year, Strang's book of errors in English for correction was discussed on perhaps eight Mondays. On the others, compositions were written on subjects taken from the required books. These were criticized somewhat by the teacher.

The number of written exercises would average one in two months throughout the course.

The time devoted to English composition was five hours a week the ~~first year~~ half of the first year. This consisted in lessons from Chittenden's English Composition with no written exercises. The rest of the ^{the time was} course, two hours a month.

The relative amount of English to Latin was as one is to five of English composition ^{to Latin} as one is to ten. This is without counting the exercises on Chittenden's.

On the whole, I should say the preparation in English at the ^{Latin} School is wretched and insignificant compared with the preparation given in other studies.

no 16 p. 134

Preparation in English Composition for Harvard College

I will endeavor to make this account as accurate as possible, ~~and~~ ^{but} as the preparation began three years ^{I have forgotten some} ago, details I ~~entered~~ passed the entrance examinations in 1890 I did not go to college last year nor to my preparatory school. Last year they changed the method of preparation in Eng there, so I do not ~~not~~ describe the way that it is taught there now.

Three years ago I began the study of Rhetoric. We had our recitation a week besides what we had in literature. At these recitations the teacher sometimes read us stories and we had to tell them in our own words, at other times she gave us rules for correct speaking and writing. Then we were given sentences to correct. This was done for us to make practical application of the rules.

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~~Oct 27~~
At every recitation we were given either
some sentences to correct or else an
extract of a story ^{to tell} in our own words.
These stories were handed in and
returned to us corrected. The sentences
were corrected in class.

The next year 1889-90 we spent most
of our time on the books required for
admission. About once in two weeks
we wrote a description of some char-
acters in the book we were reading.
These were corrected by the teacher
and returned to us. ~~The~~ Whenever
we finished a book we wrote des-
cription of it in our own words. This about
all the composition work that we did.

I can't say relatively how much time was
given as I did most of my preparing in
two years, and worked all I could on
everything.

I passed the admission examination
in English in Sept. 1890.
25

No. 17 p. 134.

My Preparation in English Composition

During the first three years of my career in the High School, where I prepared my self for this University, I received no knowledge in the art of writing; but at the beginning of my last year in that school the rule was made compelling each scholar to write a composition every month, the subject of which could be chosen by the scholar from four subjects given out by the teacher. which would sometimes require a knowledge of some author and at others a good imagination. The teacher would correct these compositions out of the class and then read them at the next recitation at the same time calling attention to the pupils errors.

This is the extent of my preparation in english composition nevertheless I passed the entrance examination to this University successfully.

No-18 p-135

My Preparation for English

I cannot distinctly remember what I did at the High School, but I am quite sure that I did not have to write a composition more than twice a month. These compositions were on books which we studied, and also on the authors of the books. During the last two years I have written compositions on the books required for admission to Harvard. These compositions came once a month. I also corrected, in writing, ten bad English sentences every Monday. It took me about three hours to write a composition. This work was done at home, so that no time was spent out English, at school.

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and only three hours a month at home. You can see therefore, that the time spent on the study of English was almost nothing compared with the time spent on other studies.

I passed the examination in English last June. I did not expect to pass it because the composition which I wrote was only a page and a half long and many of the fellows whom I knew wrote one of the brown paper examination books full.

No 19 p 137

Preparatory Work in English Composition.

The last four years I have spent at the High School preparing for college. As the name of the school indicates, much time is devoted to English. But of course composition makes up only one part of the many into which English is divided. As I remember it, we had a composition about every six weeks during the first year. The subjects were generally taken from some book we had been reading. Scott's "Ivanhoe", Franklin's "Autobiography" come to my mind as some of the books we read. An hour every week was the time usually given to the whole subject of composition. This was about one fifth of the time given to such studies as French or Algebra.

During the second year we had compositions every three weeks. The whole time devoted to composition was one hour a week. For two weeks we read parts of Macaulay and selections from Irving's

Sketch Book" and then wrote the third week. After the compositions had been corrected, we were obliged to hand in a revised copy. He also studied Hill's Rhetoric one hour a week. These two hours a week constituted as much time as we gave to Geometry or Drawing, but about two thirds of the time we gave to French.

The third year we did not have, as a class, so much composition as in the previous two years. One composition, we dignified then by the name of essays then, - every two months was the average. The subjects were historical, since the English and History were taught by one man. This was only about one tenth of the time devoted some subjects. I, however, prepared some "essays" to deliver in the school exhibitions. One subject I remember was "the advantages of a scientific education over a collegiate." A fellow-student had just the opposite. My presence here shows how well he acquitted himself, though I believe he is now

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at a scientific school I also read a number of books from standard authors in order to try for an essay prize. The character of this theme makes it needless to say that I did not get it.

The fourth year work was directly preparatory to Harvard college. He read the prescribed books and wrote compositions every two weeks, on various subjects connected with these books. He studied Straug's "Exercises in False Syntax." Two hours a week, about two-thirds of the time given to the generality of studies, was the amount of time devoted to English composition as a whole. After this preparation I expected to pass in English and I did.

No. 20. p. 138.

My Preparation in English.

At the _____ School in _____ which I attended for eight years before coming to Harvard, one written composition was required from each student every four weeks. The head-master preferred to have the students write narratives of personal experiences, but generally left the student to choose the subject. Last year, most of my compositions were on the books which I read in preparing for College.

I usually spent on each of my compositions about one hour, which was one one hundred and twentieth of the time I spent on all my school work. I passed the entrance examination in English last June, my composition was written on Balfour of Burley, a character in Scott's "Old Mortality".

No 21-p-139.

My Preparation in English.

My work in English composition last year was about as follows. My teacher was Mr. [] of [] School. For I am one of " [] boys". Every week we had given us a whole or part of one of the ten books prescribed by Harvard for entrance examination. A week later we were given an hour to write a composition limited to two pages of theme paper. The subject was taken from the book just read. Such subjects as Judge Dymally's Character, Hephzibah's shopkeeping, Death of Dr. Martin Luther, Wanderings of Marquette were given.

A week later, three compositions were returned to us with all ~~corrections~~^{mistakes} marked on them. We used the card used by the English Department at Harvard. We took our compositions and made all corrections either rewriting or on the original paper. Then Mr. took each fellow separately, and went over his corrected composition with him. After it was satisfactory his name was checked by Mr. as having finished his week's work. Each week we were spoken^t as a class by on the general mistakes of the compositions and some^{were} read to us. The time spent was one hour for writing the compositions and a half an hour for lectures per week.

The time for corrections and reading was outside work and varied each week. In Latin and Greek we had three recitations a week. Therefore I suppose we spent about one third the time on English Composition that we did on Latin + Greek. But the outside work would change this proportion a little.

Every one of
boys passed their English Examination last June.

No. 22. p139.

My Preparation in English.

At school I was in a class of about eighteen boys, we wrote compositions once a week, the time for the ^{writing} composition was one hour, and we had half an hour ^{in which} to correct our last week's composition.

Our subjects were taken from the books which were given in the Harvard catalogue, and were similar to those given on former examination papers. We wrote on character and narrative generally, and our papers were sent to somebody connected with the college english department to be corrected and criticised.

One reason, why ~~we~~ did not write more than once a week, was that we could not get our papers back in time. The time spent in school on English amounted to about two hours a week; outside we had to read all the books given at least three or four times. The reading was of course easy but there was a great deal of it, and I spent about as much time on it as I did on the easier studies. In school the work was not so hard as the other studies, but it took about as long to do.

I passed the examination in June.

No 23 p-140

My Preparation in Rhetoric & Composition.

In the high school I took Rhetoric and composition the first year. Then that was of as much account as any other study. The second year the college division dropped Rhetoric and took up Greek. I wrote compositions about once per month.

The third year I wrote compositions about once per month. The first year the subjects were given out and were mainly in connection with the work in Greek and Roman history.

The other years we chose our own subjects. The compositions were all written out of school.

The last year I only remember writing one composition besides my part at graduation, and I never heard from that after it was handed in.

The time which I should have spent on composition and Rhetoric and ~~filled~~ satisfied the requirements of

the school leaves to the time which I should have spent on Greek, Latin or Math about the ratio of one to ten (1:10)

In justice to the school I must add that I spent much more time in preparation for English, including the reading.

I failed in the entrance examination in June but passed in September.

In June I was nearly sick and wrote about Miss Pyncheon's shopkeeping which I knew very little about. In September I was rested and well and wrote about The Smit against Antemo which I knew something about as an class learned nearly one half of the Merchant of Venice and once recited the trial scene.

No-24 p140.

My Preparation in English

I was prepared for the Harvard
English examination at the Academy.

Our class was obliged to write one
composition a week in the class room. We did not
prepare for this composition at all, though the
teacher asked us to think up the subject beforehand;
we chose our own subject and had about three
quarters of an hour to write on it.

We went on this plan most of the time,
but wrote a great many compositions on subjects
taken by our teacher from books that we had read; sub-
jects such as, Silas Marner and William Dane.

This work that I have been speaking about
was done in the third hour of the three hours a week
which were devoted to English. Our teacher often spent

fifteen minutes of the other two hours in discussing grammatical points. We did not always spend the third hour in writing but sometimes used it to read aloud in.

The teacher always criticized our compositions, and sometimes he made us criticize each other.

Calculating roughly, I think that I spent one fifteenth of my time in school on English Composition; and about one thirtieth of the total time that I spent on lessons, in and out of school, I gave to English Composition.

During the year we wrote one or two long ten page compositions. With this preparation, I passed the Harvard examination in English.

My School-work in English Composition.

I have had one year's study in English Composition at school, and ^{during} the first part of that year, more attention was paid to studying English literature, than to writing compositions.

About Christmas we each had to write a ten page composition on some subject connected with the Alhambra. This work was done outside of class and without a time-limit. After Christmas we began to write one composition every week; the majority of which were subjects chosen from the books we had been reading. We were given three-quarters of an hour for each of these and the subject was not told us beforehand.

About every third week the composition on a subject of our own choice was

required, instead of the usual kind.

During the last three months of the year we were given the subjects on the successive entrance-examination papers of Harvard College, and required to write a composition on one of them, with the same time limit as before. This work was also weekly.

During the last month of the year we had regular weekly examinations in English the papers being those used in Harvard Admission English with the specimens of bad English as well. All these compositions were corrected and handed back, after which we had to change the mistakes and some times rewrite the whole paper.

The time which I spent on English composition alone was very small being

only about half an hour weekly outside of the regular three-quarters of an hour in which we wrote.

I passed the examination in June 1891. I find, upon looking over this, that I have forgotten to say anything about the proportion of time spent on English Composition.

On Composition, I spent half an hour outside and three-quarters of an hour in recitation; on English recitation literature, two hours outside and two hours of recitations; on Greek, five hours outside and five hours of recitations; on Latin, five hours outside and five of recitations; on Mathematics, ~~five~~ three hours outside and three of recitations.

No. 26 p. 142

My Preparation in English

My preparation for the examination in English was carried on for two years the first year at the High and the last year at Private School in

At the High School the recitations were given up to talking about style and language. Once in two or three weeks I had to write a composition describing simple things. Toward the end of the year, I wrote one comparing Longfellow's *Evangeline* and Webster's *Bunker Hill Oration*.

I should say that English which came twice a week, occupied about one fourth of the time that Latin and Greek did, and about one half that Mathematics did.

At the beginning of last year I left the High School and went to Mr. School. Most of my

preparation was made there.

Every Monday there was a paper in last English, which was composed of ten sentences, which I had to correct.

Once a month, or about that, I had to read one of the books which is required for college, and then I had to write a composition on it. This composition was corrected and handed back.

I had but one exercise a week in last English, which required very little preparation, and I had eleven recitations in Latin, eight in French and seven in Greek. The composition came about once in four weeks and required about ten hours work.

Four of us took English at
and we all passed. Also one at
the annex. The High School sent
seven, and two of them failed

No 27- p-142.

My Preparation in English Composition.

For three years our class devoted one hour a week to written composition, and, during the last year, two hours more a week to Strang's Exercises and Professor Shill's Rhetoric, which we studied through Improperities.

Our subjects were taken from the required reading, with only one exception that I remember. Our teacher let us go to the game at Springfield last November, and when we came back to school Monday, we were required to write about what we had seen.

We had written criticism on our work in the symbols used at college.

At the end of the composition we were told our principal faults, and we corrected the paper on that day, and gave it back. If it was not properly corrected, our mark was lowered.

We had English three hours a week, which is as long a time as we devoted to anything but Greek. We spent three hours a week on Homer and two on Herodotus, during a portion of the year.

We spent some time on the Rhetoric, and studied it carefully, using the Century dictionary to look up Barbarisms such as Gerymander. In the examination I wrote on Irving's "Adventure of the Mason", and passed.

No 28-p-142

My school work in English Composition.

I had to write a composition once a week on some subject out of one of the prescribed books or else on one of the books themselves. These compositions were corrected, or rather the mistakes were pointed out uncorrected, and then handed back. If necessary they were rewritten. Good and bad compositions were sometimes read aloud to illustrate good and bad English.

All the criticism I had was in the compositions on the different characters and books.

English came once a week. About three or four hours a week were devoted to English Composition, whereas about eight hours were devoted to Greek.

I passed in the preliminary examination.

No 29. p. 145
My Preparation in English Composition.

During the first year of attendance at my preparatory school, there were perhaps six written exercises. These consisted of letter writing in the class room, and other similar exercises. Besides this I was required to prepare detached sentences for perhaps a dozen times out side of the class room. These were mostly criticised and corrected in the recitation room.

There was no more composition ^{work} until the last (fourth) year of my attendance. During that year I was required to hand in four written ex-

ercises, taken from subjects in literature that had been taken up in the school. These were criticised by the instructor who would ~~make~~ ^{draw} a straight blue line under, as on the margin against, any fault. These marks were interpreted if desirable by the instructor outside of the class.

This was all the exercises in English composition that was intended for those preparing for college. Each student was required to have in all (all studies taken together) sixteen hours of recitations per week.

I passed in the entrance examination.

No 30 p 145.
Preparation in English

I graduated from Academy and
was in the English class the two years thereafter.
Recitations came twice a week and the average
student made no preparation for the recitation
unless a passage was given to commit to
memory.

Very little composition work was given. We
kept the required books in classroom and
the longer ones outside and when we had
finished each book subjects were given
out in the recitation period upon which to write.
If you did not think you could do justice
to the subject or subjects given you might
choose one for yourself.

Only once in the two years I was there did
we have to write a composition outside of our
classroom which was in Lind Clive. The
subjects given were always on the books
required for Harvard and the time never
exceeded forty minutes. I passed my English
examination for Harvard.

My Preparation in English Composition

I took the full four years Classical course at academy
 I remember writing four or five essays. One was on the "Story of Marmion", and the rest ^{were} all on subjects taken from Rob Roy. These were all written when I was taking the English of the Middle year. These essays were all about four pages in length. They were corrected by the Professor and returned to me. I have them in my possession now and any one who desires may see them.

I should say that the total amount of time I spent in the practice of composition writing during my four years course was not less than eight nor more than twelve hours.

The relative time spent in English Composition to that of my other studies was, I should say, in the ratio of this

to the home work to four years
work in the rest of the course.
The ratio of hours would be
about one in English Composition
to five hundred in other
branches.

I passed in English on
my entrance examinations
for Harvard.

No. 32. p. 145

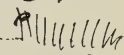
The last year of the course was occupied ^{by us} in the study of Lockwood's Rhetoric, and in further reading of Shakespeare. Sentences and short stories contained in the Rhetoric were rewritten in the class-room, with a view to correcting mistakes in spelling, use of capital letters, and construction. Lots of synonymous words were given, to be used in filling blanks left in sentences. Short sentences were rewritten to form a smaller number of longer ones.

In the study of Shakespeare, passages were ~~given~~ assigned to be committed to memory, and the play was read in the class-room, and exercises were written ^{about} the plot or story of the play, or some prominent character in it.

Although some practice was given in English composition at ~~each~~ ^{nearly} every recitation, the number of exercises written outside the class-room was small, in comparison to the work done in other branches. Perhaps, therefore, it is a noteworthy fact that I passed the examination in English for admission to Harvard College ^{and}

No. 33 p-145
My Preparation of English.

I began English composition in the High School, in the fall of 1887. We had to write essays due in two weeks, and generally we chose our own subjects, although sometimes they were given out.

The next fall I went to  and entered the Preparatory class. The first year I had almost no composition, not writing more than two ^{essays} during the year. The next year we wrote a few more but not more than five or six.

The next year I went into the class below, and took the same studies over again. In the regular work we wrote a few more compositions, and in addition to this I tutored with Professor

three times a week. Twice a week I wrote essays, and at the third hour he corrected them and I wrote them over.

I wrote on several of Scott's works, among
others, The Fair Maid of Perth,
Peveril of the Peak, and Woodstock;
and also on Longfellow's
Courtship of Miles Standish, and
Evangelin. In the spring term I
gave most of my time to composi-
tion. I once times choosing the subject
my self, but generally having
it given out to me.

No 34 - p. 145

My Preparatory Course in English
A year ago September, I
entered "The

Principal, - and studied
in order to enter the Mass School
of Technology, in Boston

My English studies consisted
in, first reading the required books
then writing upon subject connected
with these books. I devoted three
hours (60 minutes each) a week to
my English and towards the last
of the year I wrote 3 compositions
a week. The compositions, the teacher
usually considered rather poor,
usually the fault was in writing
and especially spelling. The teacher
also criticised the English a good deal.

After the compositions were collected I copied them in a book which I never looked at except to copy - exercises

I took my examination in the Spring and was condition in English. English was my only condition

During the Summer I changed my mind and decided to go to Harvard as a special student I did not try to pass off my condition in English

Thus is practically all the English training I have had I have written compositions one a week, or once a month, all my school life, but

these never amount to anything

In School my English was given ~~me~~ an average amount of time, not so much as some studies but more than other studies.

The principal the teacher went on was this, I should know what was good English and what was bad, but I need not know why it was good or bad English.

No 33-p-141

Preparation for Harvard College in
English Composition

We spent one year, in preparing
for English at the
School under Mr

We wrote one monthly composition ~~main~~, which was prepared outside at a week's notice

These were written on various subjects not always being connected with the reading

Besides these we wrote synopses of a certain chapter in the book we were reading ^{at the time} Some times we wrote two or three of these a week and sometimes more.

These were usually written at a days notice, or sometimes given out in the class to be written immediately

The best of these small compositions were read in the class but usually the best two of the monthly compositions were published in the

school paper,

The subjects of these themes differed widely. The first we wrote was a comparison between Achilles & Agamemnon bearing on the first book of ~~Homers~~ Thad. and another the story of the Ancient mariner. Several were on the prescribed reading.

We spent very little time on English Composition. I should say that we spent four hours a month on the monthly compositions and on an average, from four to five hours a month on the small exercises.

We spent from one to two hours ^{a week} on English Composition where we spent eight on Latin or Greek seven on Physics and three or four on Geometry.

I passed the Harvard examination in English

No. 36 p. 147.

My Preparation for English A.

My first really specific preparation for the Harvard examinations began in the fall of 1889 when I entered School. Before that time I had had continual practice in composition-writing, preparing generally two compositions per month. At my work was, for the first year, to read the books which were prescribed by Harvard College for the entrance examinations, and then to write a criticism or a summary of each book. This gave me about one composition per month to prepare. The following year, I read the books which I had already read, (the first year I did not complete the list) and the others also, treating them in the same way, as regards composition-writing, as I did the first year. Last year also, I studied Professor Hill's Rhetoric, and I had practice in correcting mistakes in English sentences.

Spaced my substance examination in English.

The time spent upon English by my class was on an average two hours per week, excluding time spent upon extra reading, to be done outside in whatever time we had to devote to it. On comparing time spent upon English with time spent upon my other studies, I find that the proportion varies with different studies from one third to one half. But English was not slighted, by any means, for every paper we wrote from Latin or Greek or French or German, every recitation we made, all our conversation, at least that part of it where the instructors could hear and correct all our writing of any kind, — all these things were brought as much as possible under the sway of good English. And it was always impressed upon us to try and make our conversation & writing as correct as possible, at the same time not sacrificing plainness, smoothness & interest.

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No-37- p-148

While at.

School in the Third & Fourth,
Forms (equivalent to the 2nd and 3rd year
in an ordinary preparatory school) very little
attention was paid to English.

The fact that I
passed in my ^{Harvard} Entrance Examinations ^{in English}
is not due to the preparation which
I received at I think.

In the Third Form
year we learned to tell the different
parts of speech, studied a little
spelling, and read one of Shaksperes
plays, learning the principle parts of it.
In the Fourth Form year we wrote
a composition once a week, the
spelling of which was corrected and
the composition, if not good,
criticized. The ratio of my English
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hours to the hours of my other studies, chiefly, Latin, Greek, and Algebra, was ~~nearly~~ 1-28. The subject of the ~~ew~~ compositions could be chosen by the writer.

Most of my English preparation was learned this Summer.

No 38.p-148

My Preparation in English Composition

I was prepared at School
New Hampshire. In the course
for preparation about one theme
in every two weeks was written.
The subjects of these themes were
books, historical events, and characters.
The time spent on English Composition
was about three hours every week
and, as nearly as I can remember
amounted to about one tenth of
the total work of each boy.

I passed the entrance examination
in English Composition. Whether this
happy event was the result of the
course in English Composition which
I took at school, or not, I do not
know. I think that I could have
passed without it.

No 39-p 148

My Preparation in English.

I was asked to spend one hour a week at home, writing a composition. The subject of this was given out by the teacher.

During the recitation hour, which took place once a week. I wrote on topics taken from the books which I was reading.

The subjects for home work were on such things as "Electric Cars" and etc.

The time and work devoted to the English Class did not compare ^{with} ~~to~~ the attention shown to the others requirements in the proportion of one to five.

Although not being very well prepared I managed to pass my examination in English.

No 40 p-148

My Preparations in
English.

The study of English was taken up by me about two and a half years ago. At that time I was in Germany and never thought that I would once be in need of this language, or else I should have studied it in a more thorough manner. A half a year afterwards, at my arrival in America I found myself utterly unable to ~~use either written~~ understand spoken English, much more to speak it myself could however read easy English fairly well. Immediately I entered the High School. During the first months of my attendance I could of course not keep pace with the class in English composition. ~~and did show the arrangement of~~ the course was at that time I do not remember. The following year my last year in school I had made such progress in English, that I ~~now they could~~ take part in the work.

69.

of the class. Still I think that my failure in the admission examinations in English is to be partly ascribed to the method of teaching English in the school. I must confess, that in my opinion English literature and composition was treated more like a less important study, instead of being made the principal study. We had only one hour a week in English. If I remember rightly, and the great amount of reading we had to do took up most of ^{the} time, so that comparatively little attention was paid to grammar and composition. The number of themes per month or week was not always the same, besides this many themes were not handed in at all, since strict rules were not enforced. The subjects of themes were characteristics of persons in the works read, narrations sometimes criticisms.

No 41-p-148

My Preparation in English Composition

I was prepared for college in the High School. In my freshman year in the school, I was required to hand in one composition per week. I wrote this composition, in one hour, without preliminary preparation. The instructor gave a list of subjects from which I selected the one I wished. This was a general exercise, but I was also required to hand in compositions, at irregular intervals, taking the subjects from the works I read in the literature class.

The second year of my preparation I continued to write compositions at different times, probably averaging three per month.

The third ^{year} I read, more attentively, some of the books required for admission to Harvard College. Then I selected subjects from these books, and wrote two or three compositions per month on them. In that year, I corrected sentences in which were improper grammatical constructions, noticing the rules

of grammar, which had been initiated.

In my fourth and final, year I devoted my attention more particularly to grammatical construction, and correction of incorrect sentences. I was also obliged to write a short essay in class on a subject selected from the book I was then reading, in addition to one composition per week, prepared at home.

In the third year I recited English two hours a week, in a class and during the fourth year, but one hour a week, with whatever time, I could put on it outside. English received the smallest amount of time accorded to any study.

I took the Harvard examinations in June 1891, and successfully passed the English examination.

No. 42 p. 149

My preparation in English

I passed the entrance examinations in English in June 1891. In preparation for the examination we were required to write a written exercise each month of the school year. The first year we were in school we had, of course, very little knowledge of composition, so easy subjects were given us to write upon, so that our essays were usually in the form of narrative or stories about such things as, "A Summers Experience", or "A Fishing Excursion", or "A High-ride." The second year we were in school we wrote about the same general class of subjects but our compositions were longer and fuller in descriptions and details. Sometimes fanciful subjects were chosen in ~~which~~ writing which imagination only and not experience could assist, such as "A Trip to Mars" or "Journey to the North Pole."

In our third school year we changed

the class of our subjects and made them deeper and harder to write about. Very often they were lives of famous characters we had read about in our studies of the classics, for instance, Cicero or Cyprian. Some of them were essays on the books we had read in our preparation or were comparisons of style of two of the authors with which we were familiar.

In our last year we had quite a wide range of choice for our subjects. In this year we had to write only one composition each term. but we had to memorize these and ~~write~~ deliver them as "orations" to the whole school. Of course, the style of writing had to be entirely different for pieces which were to be spoken than for mere essays.

Our subjects were made still harder and deeper this year. We were advised to choose classical subjects, such as Achilles in his

Tent," "The Influence of Homer
on the Greek Life," etc.

We spent, on the averages, about
four hours a month on our composi-
tion, or about an hour a week. There
were nine months in the school year.

About one-twentieth or one-
twenty-fifth of our entire work was
spent on our Composition. Persons
who could write with readiness ~~and~~
without taking much time for it
would spend about one-fortieth of
their work on English Composition.

No 43 - p149

Preparation for English A.

About five years ago, I commenced my real work in English under a Harvard tutor, class of '85. She drilled me in Rhetoric and in writing, giving me themes to write every two or three weeks. During the three years I was under him, I did a great deal of outside reading, Shakespeare, Dickens, Scott, etc.; before this I had read very few of the standard works.

In 1888-1890 another Harvard man, class of '89, tutored me. During this year my work was principally on the selections given out by the College - for the admission examinations of 1890. As a preparation on this work, I wrote a theme on each book, after I had read them. In June 1890, I passed my Exams including English.

No. 44. p. 150.

Preparation in English.

I Began my preparation in English about the first of last November. I worked with a private tutor and my method of work was as follows. I Began by reading the list of Books Prescribed in the College Catalogue. After I had read a book I then wrote a composition on it which I handed to my tutor and which he corrected. I then took the corrected copy and taking advantage of the criticisms wrote another composition. This made about 4 written Exercises per month

The Subjects of themes were of
course the prescribed Books
I devoted about 2 hours a week
to English composition
I think that I spent more
time in any other Subject than
English composition.

I Passed. 77.

REPORT OF THE COMMITTEE ON ANCIENT HISTORY, MEDIÆVAL HISTORY, AND ROMAN LAW.

June 15, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee on Ancient History, Mediæval History, and Roman Law respectfully submit the following report:—

It is unnecessary to go into a detailed description of the objects and methods of the several courses of study that invite the attention of this Committee. A few points, however, may be noted down.

The introductory course, numbered One, attracts a class even larger than before; but this multitude, now counting more than three hundred students (of whom two-thirds are Freshmen) proves quite manageable in the hands and under the direction of Professor Channing, who continues to have charge of it. At the mid-year the course regularly passes, still under the same instructor, over to Modern History, with which this Committee is not formally concerned. And in the second half-year of 1891-92 a course (numbered Four) has come in, so placed as to form, by way of sequel to the first period of course One, a suitable foundation for more extended study in Mediæval History. This also attracts a large class, which under the teaching of Professor Emerton has on its list at the outset one hundred and twenty members, more than one-half of whom are Sophomores.

Few other changes, except as to time or order, appear to have been very lately (that is, down to the end of the College year 1891-92) made within the range assigned to the cognizance of this Committee. Ample and appreciative attention has been given in the department to Mediæval History. Definite regard has been paid also to the period of transition to the Middle Ages; but, beyond this, little that answers to the word "Ancient" has offered itself for two years past in the series of courses actually conducted by instructors in the department of History. An important course in Roman History was indeed twice entered in the list of studies, but only to be expressly omitted. It seems singular that necessity or convenience should have left so little definite room for ancient times in a formal schedule of historical study. The fact, that in a rudimentary way the history of Greece and Rome forms an alternative part of the outfit required for admission to the College, might naturally enough have suggested

some stable provision, if possible, for riper study in the College itself. The student, to be sure, has been regularly referred for additional instruction in certain directions to the classical departments. Highly valuable as such collateral service may from time to time prove to be, the connexion with these departments is somewhat casual and uncertain.

Looking forward, however, it appears that the scheme of study for 1892-93 proposes to restore the omitted course in Roman History. Two new half-courses are added, at least one of which may well bear more or less on Ancient History. There will, therefore, on the whole, be a decided gain in this part of the field with which this Committee has had to do.

Two or three variations of former historical courses lying within the scope of the duty of this Committee appear in the schedule for 1892-93, and a few entirely new titles, including those already mentioned, are introduced. Mr. Schofield, whose way of teaching Roman Law has been found by the Committee an interesting one, now retires. His successor, Mr. Williams, has paid much attention both at home and in Germany to the study of Jurisprudence.

At the beginning of the next college year an important alteration in the organization of the department of History will take effect. The existing departments of History, Political Economy, and Roman Law have been fused or welded into one, under the name of History and Political Science, embracing the three categories of History, Government and Law, and Economics. This arrangement may necessitate a corresponding change in the designation of the present Committees on History.

For the Committee,

HENRY W. TORREY, *Chairman.*

REPORT OF THE COMMITTEE TO VISIT THE MEDICAL AND DENTAL SCHOOLS.

November 16, 1892.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee appointed to visit the Medical and Dental Schools respectfully reports that:—

Members of the Committee have visited both schools; have attended lectures, recitations, and clinics, and have inspected the laboratories and museums; professors and instructors have been conferred with, and the acquaintance of many of the students has been made.

THE MEDICAL SCHOOL.

Several preceding reports of Committees to visit the Medical School have given information concerning the voluntary fourth-year graded course, and have invariably referred to the great importance of establishing a compulsory fourth year in place of the voluntary fourth year. The report for the year 1888–89 refers to this in the following words: “Your Committee reiterate their previously expressed conviction, that more time is needed for the study of medicine as it should be taught to-day than the present course of three years affords:—that a compulsory four years’ course is required to bring the Harvard Medical School to the proper level of medical education as understood and recognized at the present time, and, especially, that the study of medicine must begin at an earlier age. This can only be effected by some change made in the undergraduate department of the college.”

It is our privilege to be able to report to you that this important change was voted by the Medical Faculty in May, 1891, and went into actual operation this September, so that, from the year 1896 the degree of Doctor of Medicine conferred by the Harvard Medical School will represent four years of study of nine months each, preceded by an entrance examination, with graded courses and stated examinations of each years work. Other schools—as the medical department of the University of Pennsylvania and of Columbia College—when first contemplating a similar step, made it contingent upon raising a certain sum of money or the expiration of a certain

limit of time. The University of Pennsylvania has finally decided to have a four years course, beginning 1893-94, and Columbia College, the medical department of which is better known as the College of Physicians and Surgeons, has not yet decided to have a four years course. Seven years at either of these institutions will give an A.B. or S.B. degree and the medical degree.

The Harvard Medical School has boldly taken this step, and the Faculty has shown that it has the courage of its convictions. The School has done what it thought was necessary and right, without waiting for a suitable guarantee fund and without waiting for that change to be effected in the undergraduate department of the college which your previous Committee considered to be essential. The School relies upon the intelligent appreciation of the public for the support of the best in medical training when it is offered. In this, the Faculty has not, thus far, been disappointed, though it was felt that the first few years would be critical ones. The entering class this year is a large one, the largest but one in the history of the School.

The necessity for a four years course in medicine will probably be more and more generally recognized. If men can have both the A.B. and M.D. degrees they would prefer to take them, but rather than spend eight years in their acquisition many will probably take only part of the academic course, two or three years, sacrificing the A.B. degree to an earlier acquirement of the other. This is indicated by the change in the proportion of those entering the Medical School with the A.B. degree. This proportion, the Committee is told by the Dean of the Medical School, is not as large as it was seven years ago, but the number of those who have taken part of an academic course before coming up to the Medical School is quite large. There were twenty-four such among those matriculating this autumn. This will be shown more fully in the annual report of the Dean of the Medical School to the President.

The Medical School has been, is, and probably will continue to be, self-supporting, and, instead of a burden, it is a very great credit and source of distinction to Harvard University. The School desires and requires money, and a good deal of it, to attain its proper development — we have yet to hear of a department of the University which does not. It needs large sums for the endowment of professorships, and smaller sums for the establishment of scholarships. There are indications that the receipt of such sums may from time to time be realized. \$15,000 were given within a year for fellowships by a living benefactor, \$10,000 were bequeathed very lately as an unre-

stricted fund, testifying to the loyal interest of a laborious physician who gave his life to the zealous pursuit of his profession, and some of the fruits of it to the School which taught him.

Next to endowed chairs and scholarships, the School needs for the fullest and freest success of its clinical teaching a hospital, the appointments to which should be under its own control. For the establishment and maintenance of such a hospital a very large amount of money would be required. In the not distant future it is not impossible that some solution of this problem may present itself. However that may be, the *immediate* needs of the School are, as has been said, endowed chairs and scholarships. A school without the control of a hospital is restricted in the selection of its clinical professors. In other departments, the Harvard Medical School is already in a position to draw distinguished teachers from other schools, and has this year strengthened its Faculty by a Professor of Pathology taken from the Johns Hopkins, and an Associate Professor of Physiology taken from the University of Michigan.

Since the last report made to this Board, summer courses of study have been established by the School in many branches of practical and scientific medicine. The clinical courses were given at the hospitals and dispensaries of the city by the physicians and surgeons on duty. Practical instruction was also given in several of the laboratories at the School by the instructors in charge. These courses were open to both graduates and students in medicine. Forty-one such courses were offered during the past summer. Occasional courses are also offered to graduates during the winter months.

The amount of clinical instruction has been largely increased in the last two or three years, and previous criticisms in regard to this particular are much less applicable. The clinical instruction at the Harvard Medical School now compares very favorably in all departments of clinical medicine, whether as to quantity or quality, with that to be found at any other centre of medical education in this country. The laboratory instruction was previously acknowledged to be, and continues to be, excellent. The Faculty has constantly added to the number of teachers giving instruction under the auspices of the School, and in this way some of the benefits of the extra-mural system are secured. No less than forty-three teachers contribute to the instruction given at the School at the present time. This large corps of teachers, notwithstanding that many of them receive very meagre salaries, and the maintenance of laboratories make the support of a good medical school so expensive in comparison with other departments of a university — with a law school for instance.

Your Committee regrets that there is no Professor of Therapeutics. So important a department should not be left permanently without a head. At the same time, it is doubtless better to wait the advent of the right man rather than to appoint someone merely that there may be such a professor.

The new Sears building, the gift of a graduate of the School, which provides admirable laboratories for research and instruction in pathology and bacteriology, has now been occupied for two years. Much may be expected from the facilities which it affords for the pursuit of those branches of medical science to which it is dedicated.

In general the teachers of the School are serious, earnest, devoted, and highly competent. If your Committee were to make any criticism it would be to suggest that the manner of presenting a subject is only second in importance to the matter. Medical men do not, as a rule, study the art of speaking; but training "in those arts which are indispensable in a democracy for gaining a just influence over the public mind and conscience," to which reference was made in a recent report of the President of the University, is not to be neglected as contributing much to the usefulness of the successful teacher.

THE DENTAL SCHOOL.

The Dental School has still further raised the standard of its course by requiring an attendance of three full years. Time spent with a practising dentist outside of the School is no longer accepted as part of the school course. The entering class is not quite as large as last year, perhaps on account of this change, but it is not thought that this will continue to be the case, as the value of the degree will meet with increasing recognition. There are fifty-four students in attendance this year.

The situation of the school building is not a very favorable one, and the building itself does not now, and will not in the future, afford the space and the convenience desired by the instructors for the best results of their self-sacrificing work. With the coöperation of the Alumni Association, modelled after those of the Law and Medical Schools, the Faculty have under consideration a plan for raising between one and two hundred thousand dollars for a new building to be erected somewhere on the Back Bay. About twelve thousand dollars have already been contributed by one donor. Good work is now being done by the School, but still better work would be done with increased facilities.

The words with which Dr. Shepard closed his address at the twentieth anniversary of the Dental School are no less true now than then :
“ This school has a double claim upon the public ; first, as a trustworthy place of education for a profession which is now recognized as indispensable ; and, secondly, as a charity which, like hospitals, infirmaries, and dispensaries, ministers to the suffering poor.”

GEORGE B. SHATTUCK,
H. H. SPRAGUE,
C. F. FOLSOM,
MORRILL WYMAN,
ALGERNON COOLIDGE,
J. S. BILLINGS,
W. S. BIGELOW,
G. V. L. MEYER.

REPORT OF THE COMMITTEE ON GREEK.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE : —

As it has been determined by the Board to consolidate the separate Visiting Committees on Greek and on Latin into a general committee on The Classical Department, this seems to be a suitable occasion for the outgoing Committee on Greek to present a brief final report, contrasting in a general way certain particulars in which the present methods of instruction in Greek at Harvard differ from the ancient practice, and giving a succinct account of what the actual system is.

It will not be necessary to dwell upon any evils or short-comings of the old system from the student's standpoint, as they were exhaustively illustrated some ten years ago in Mr. Adams' *Φ. B. K.* address. Only those, however, who were directly concerned with the instruction, given or attempted, could know of the discouraging influence of former conditions upon the teacher. How was it possible for any high standard of scholarship, anything better than bare mediocrity, to be expected of the student, when a whole class was held in check by the dead weight of all its dull and lazy members? When the instructor's mind was distracted by a conscientious effort to assign a just mark for each individual performance of the student, how must the freedom and the stimulating power of his teaching, of necessity, have been impaired! As the teacher's function was mainly restricted to hearing lessons, it is not strange that the lessons were speedily forgotten by the student. What a sheer waste of time was the whole business for both! In the judgment of my classmate, Professor Goodwin, in which I fully concur, in our time fully three quarters of the recitation hour was wasted, for the better scholars, in hearing those who knew nothing of a subject attempt to talk about it.

The first step, accordingly, in the great reform that has been wrought in the college system, so far as the methods of instruction in Greek are concerned, was taken, when the custom of giving a mark for each recitation was abolished, and written examinations were substituted to ascertain the student's progress. The results of these examinations were made the basis of college rank, and the passing of them satisfactorily became the decisive test whether any particular study was to count towards the student's obtaining a degree. By this method the neglect of study was no longer punished directly, but simply became a hindrance to attaining a degree, and successful shirking of the daily work ceased to be attractive.

But the complete application of this principle could not be made so long as most of the college studies continued to be required ones, and thus the way was directly paved for the introduction of the elective system, the final cause of all the improvement in the method of teaching Greek. At once all parties felt themselves emancipated. The ill-prepared, incompetent, or lazy student could attempt some course which he believed to be easier. The conscientious student might devote himself to whatever subject he believed to be more for his future advantage than Greek. While the teacher, at last, could give his whole time and strength to lending the best assistance in his power to those who were really striving to learn, and to helping them to understand the immediate subject of his instruction. The old fashion of parading unreal knowledge in the recitation room came to an end. In its place the student asks questions as well as answers them, and joins in the discussion of the topic in hand. The greatest advantage, however, made possible by the elective system, has been the multiplication of courses, especially in the higher branches of learning, and the consequent reduction in size of the classes receiving instruction together. By this the personal influence of the teacher is brought to bear directly upon the pupil, and intercourse between them is greatly facilitated. No subject of instruction in the college has been more benefited by this change than Greek and in consequence the standard of scholarship in that language has been greatly elevated. To accomplish this, of course, has required a large increase in the teaching force, rendered possible by the steady growth of the resources of the college. When Greek and Latin were both required studies five teachers sufficed for both. Now there are three professors of Greek, three professors of Latin, a professor of Classical Philology, an assistant professor of Greek and Latin, an instructor in Greek and Latin, a tutor and two instructors in Latin, and an instructor in Greek,—thirteen in all. Whereas formerly one regular course in Greek and one in Latin was provided for each of the four classes, now twenty-two full courses, and nineteen half courses, of various grades, are offered to all who are competent to take them.

There are four essential particulars in which the modern system of instruction in Greek at Harvard will be found to differ from the old method:—

First, In the introduction of the practice of reading an author at sight, in order to insure a real command of the language.

Secondly, As a result of this, in the establishment of courses of reading which include the entire works, or large portions, of an author,—mainly from the point of view of literature.

Thirdly, In a better coördination of the different courses of instruction, so that the various authors may be read with a wider scope.

Fourthly, In the attention now given to subjects, which, although

they are a direct means of interpretation of the authors read, nevertheless are pursued as topics distinct in themselves, such as ancient philosophy, antiquities, and the like.

A little more of detail under each of these heads will perhaps be advisable to make the advantages of the present method more plainly manifest.

I. About eighteen years ago the practice was introduced of requiring members of the Freshman class to read at sight a passage of Homer not previously studied. This was read aloud, in the original, without translation, and, if it was not thoroughly understood, was read a second, or a third time, if necessary, before any assistance was rendered by the instructor. This course was pursued, until eventually from fifty to a hundred and fifty verses were read at each lesson. The same method was carried into the Sophomore and Junior classes, and large amounts of Xenophon and Herodotus were read. It was continued in all the upper courses, until such a habit of reading had become familiar to the student, and it was only discontinued when found to be no longer necessary. The student had learned to read an author, depending first upon his own resources, before turning to lexicons and other subsidiary means of information. Practically it is found that a much larger amount of Greek is read now than under the old system.

II. Up to some ten years ago the undergraduate courses in Greek, following the traditional college method, were all, with one exception, composite courses, made up of portions of several different authors. To this method there is this objection that no sooner has the student begun to grasp an author's manner, and to acquire some insight into his literary style, than he is shifted into another, and compelled to begin the process *de novo*. Its advantages consist in familiarizing the student in some degree with many masters of style. At the present time as the result of the increased power of reading now acquired by the student, in addition to such composite courses others are given covering the entire works of authors, such as Aristophanes or Aeschylus, and it is intended to extend these so as to include all the plays of Sophocles and Euripides. This would represent the highest attainment aimed at in the amount of reading by the new methods. But there are also courses in which large portions of an author's works, like Homer, or sets of authors, such as the Greek Lyric Poets, are studied.

III. There is now a regular progression in the courses in Greek, both in reading and in composition, during the first three years. To take the courses in reading, by those who have offered at admission only elementary Greek, small amounts of Herodotus are read and the Iliad is begun. By those who have passed at admission in advanced Greek, and by Sophomores sufficiently prepared, the study of Homer

is continued, a beginning is made of the study of Athenian oratory and the drama, and the student is introduced to the works of Plato, and to a knowledge of the character of Socrates. This represents the regular course in Greek formerly required in the Freshman Year. To candidates for Second-Year honors in Classics instruction is given, partly by recitation and partly by lectures illustrated by the stereopticon, in representative works of the three great dramatic poets, and in some interesting portion of Greek history, as narrated by Thucydides. The first half of the third year is devoted to the study in detail of Greek oratory and of the career of Demosthenes, with illustrative reading. The second half is given to a more exclusively literary study of the Greek drama. During this year special reports are called for from the student upon topics suggested by the work of the course, literary, historical, biographical, and so forth.

For candidates for Final Honors in Classics special courses are provided, which it is unnecessary to specify.

In all the courses of reading at present it is possible for the instructor to take a much wider outlook than was in his power formerly. He is no longer confined to a simple catechising on the mere elements of a subject, but can deal systematically, chiefly by means of lectures, with its larger aspects, whether of literary criticism, history, philosophy, antiquities, or the like.

IV. Fifteen years ago twenty lectures on Classical Literature were given to the Freshman Class. There was also a course in Comparative Philology; one in which Greek Philosophy was especially studied; and one on Homeric Philology. This was all the instruction given at Harvard at that time in Classical Philology. Now an introductory course of forty lectures in Classical Philology is given to Freshmen and Sophomores. There are five courses in Greek for undergraduates and graduates. For graduates there is besides the Seminary of Classical Philology, and six additional courses in Greek. Among the various subjects treated in these different courses, although not necessarily all in the same year, are the following:—ancient philosophy, political and literary history, religion, life and manners, art and archæology, comparative philology, scientific grammar and dialects, epigraphy, palæontology and others.

Finally, the Classical Seminary has been established for the special technical training of classical teachers, particular in methods of research. It is resorted to by graduates of many other colleges, and even by those who have already been teachers in them.

For the Committee,

HENRY W. HAYNES,
Chairman.

REPORT OF THE COMMITTEE ON THE MUSEUM OF COMPARATIVE ZOÖLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY:—

The Committee on the Museum of Comparative Zoölogy naturally does not include within its duties any report upon the extension of that building to provide for the departments of botany and mineralogy, the whole structure being denominated the University Museum. The department of geology, which forms an integral part of the Museum of Comparative Zoölogy, not only is itself cramped into too small a space, but encroaches upon room needed for the zoölogical department, beside endangering the collections by the dust and dirt incident to a large crowd of students.

A calculation of the probable rate of growth of the university, when provisions were made for the departments of zoölogy and geology, made the present building large enough for the needs of more than half a generation. It is already so crowded, that students in the higher branches of zoölogy must be turned away for want of room, and the classes in geology are too large to be properly accommodated.

It appears to the Committee to be necessary, in the near future, at least, and now, if possible, to extend the University Museum, at an expense of about \$100,000, so that the department of geology can be thereby provided with sufficient space, including larger lecture rooms than those now in use, and in order that the Museum of Comparative Zoölogy proper may be reserved for the zoölogical department alone, including, of course, the rooms open to the public, to which has been added, since the last report of the Committee, the collection of South American fossil Vertebrates, now mounted and on exhibition.

Twenty years of generosity on the part of the curator of the Museum, and more than twenty years of devotion to science, in which he has been ably seconded by his fellow-workers in the Museum, have given to the University a collection, in many respects unrivalled in any part of the world, and have built up a Museum, the plan of which has been imitated in all the leading museums of like character in Europe.

The publications of the Museum, as well as the work done there, have added greatly to the reputation of the University, and cover,

beside the annual reports of the curator, since 1859, twenty-two volumes of bulletins of one hundred and sixty numbers, and seventeen quarto volumes of memoirs, of the greatest scientific value. There are, also, in press partly, the Reports of the Dredging operations of the "Blake" in 1877, 1878, 1879 and 1880, and those of the Albatross Exhibition of 1891, both in charge of Mr. Agassiz, which each include twenty-three monographs by experts. The cost of publication of the Reports of the Albatross Expedition alone, with illustration, will be about \$50,000, for which we are not called upon to provide.

Since 1887, the private munificence by which the University has reaped such vast material benefits and gained so much well-earned fame, has been directed, in great part, to other and more pressing needs of scientific research; and the generosity upon which the University has so long depended must be supplemented from other sources, or we must see Chicago, New York, Baltimore and Washington soon taking the lead in original investigation and such purely scientific work as could be better done in Cambridge, and drawing to themselves bright, young, scientific men, who would do credit to our University by carrying on their investigations here.

The Committee finds that we have to do with needs of two classes: first, on the part of the Museum; second, on the part of the University.

The first need of the Museum is an aquarium and vivarium, for which there is ample room in the basement story, for the use of students in the zoölogical department. This will probably require an endowment of \$50,000, to include the salary of an assistant. But a first expenditure of \$5,000, and thereafter \$1,500 a year, might prove sufficient.

Second, there should be in the Museum a collection of fossils from our Western States and Territories, to obtain a typical systematic and stratigraphical representation of them, for which from \$3,000 to \$5,000 a year, for ten years, will be necessary.

Third, two of the four rooms for the exhibition of fossils now in the Museum are partly arranged. To complete the arrangement of these two, and to place the other two in the same position, will necessitate the expenditure of from \$15,000 to \$20,000.

Fourth, it is quite important that there should be a marine zoölogical laboratory, in order that the students may work with a continuity of direction and purpose throughout the year. The curator of the Museum has, for sixteen years, at his own expense, maintained at Newport such a laboratory, for his own private use, to which a small number of students is admitted. Neither this nor the marine biological laboratory at Wood's Holl, however, is fully adequate to

our needs. The cost of a suitable laboratory would be \$15,000, and the annual expenses \$2,000.

Fifth, an assistant is needed in the palæontological department, with a salary of \$1,500, to take the place of Professor Hyatt, who has been obliged to resign his valuable service there, for want of funds.

Sixth, there should be six assistants appointed: one in osteology, one in birds and mammals, two in palæontology, two in invertebrates and alcoholic preparations. These six assistants are to be placed in charge of special rooms, when required for persons who wish to examine the collections. They would probably serve for salaries of \$500 a year, each; or an annual aggregate of \$3,000.

We should, also, call attention to the fact that there are no funds available for preparing an exhibit in the geological and geographical rooms. Professors Davis and Wolff have brought together a few models, as well as photographs and specimens, ultimately intended for those rooms. But, for want of funds, no systematic attempt has been made at bringing together collections which might be interesting to the public.

From the point of view of the University, it seems a great misfortune that such magnificent facilities as have been got together in the past twenty years, at an enormous outlay of labor and time and money, should be allowed to remain, to so great a degree, unutilized for want of teachers and assistants. It is also to be regretted, that, for the instruction of undergraduates and beginners, an expert should be obliged to spend his time in teaching rudiments, for which a less highly-trained instructor would answer every purpose. It is not the judgment of the Committee that it would be well to devote the Museum and its corps of experts to purely scientific research, and to exclude students, as is done at the astronomical observatory, for instance. But it is, at least, doubtful how long we can keep the best talent if it continues to find itself so handicapped, as compared with men of similar position in other universities.

The University should have, in the opinion of the Committee, five highly-accomplished men, not necessarily men who have achieved distinction, at salaries of \$2,000 each, annually, for the higher instruction of advanced students in entomology, in both vertebrate and invertebrate zoölogy, in palæontology, and in marine zoölogy, with the care and direction of a marine laboratory, if we are fortunate enough to secure one.

For routine class-work in biology, it is reasonable to suppose that further provisions must be made, in the near future, in order to supply a greater demand for such courses of study, which we must expect

from raising the standard of education in the Medical School, and through the natural growth of the University, as well as by reason of the exceptional facilities for study. This will involve the necessity of more teachers in the rudiments, some of whom we would do well to appoint now, in order to relieve, at least, the professor of anatomy, from being so driven by his classes as not to have the time for original investigations of his own, or for conducting researches through others and helping higher work.

Of course, the same need exists in the department of geology, which, it is hoped, may soon be removed to larger quarters; and the Committee reserves itself the privilege, on another occasion, of calling attention, in greater detail, to the needs of that department in connection with the Museum.

Since 1874, the Museum has received no addition to its endowment, other than that from the curator, who has, also, freely given his own services without remuneration, except one recently of \$5,000 for a scholarship. Possibly, we should except, also, \$500 a year for one of the professors, from one of his friends, and from Mrs. Leconte a collection of insects, with \$500 for cases. In the meantime, as classes grow or otherwise, the demands upon the Museum increase, while its income really grows less.

Members of your Committee have given much time to the matter of raising money for the requirements which they have outlined, but thus far with no tangible result.

The Committee regrets to report the continued illness of Professor Hagen, and the loss of his valued services in the professorship of entomology.

CHARLES F. FOLSOM,
ABBOTT LAWRENCE,
A. LAWRENCE LOWELL,
LOUIS CABOT,
FRANCIS L. HIGGINSON,
ARTHUR J. CABOT.

Presented January 11, 1893.

REPORT OF THE COMMITTEE TO VISIT THE BUSSEY INSTITUTION.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee appointed to visit the Bussey Institution submit the following report:—

The Bussey Institution offers to the young man an education in the sciences of agriculture, horticulture, and arboriculture.

The officers and instructors are distinguished in their several departments. The Institution is pleasantly and conveniently situated, the building is commodious, and the fine old Bussey Farm, for so many years cultivated by the present venerable instructor in farming, if properly availed of, offers the best opportunities for teaching the art of practical farming. The Arnold Arboretum, which is being rapidly developed under the skilful hand of its accomplished Director, affords an unequalled opportunity for acquiring a knowledge of trees and shrubs, of their comparative usefulness and value, as well as of the best methods of planting and propagating them. Indeed, the facilities for obtaining the knowledge most useful to a farmer or horticulturalist are found at the Institution, but are availed of by so small a number of students that it must be very discouraging to the instructors, and detract from that *esprit-de-corps* which is so necessary to teachers and pupils for the effecting of the best results.

The reasons for this are that the education is purely agricultural and horticultural, while at Amherst, and at other agricultural schools and colleges, a general education is offered, which must always prove more attractive to the class of young men who seek an education in agriculture.

While it is true that various courses of lectures are open to him at the college, yet these are generally of too advanced a character for the average agricultural student. Then again, the College is too far from the Bussey Institution for him to faithfully attend both of them.

Another reason for the preference given to other agricultural schools, which is very apparent, is that there are no proper dormitories, no life in common, nothing of that daily intercourse which is ever so dear to the hearts of young men. The atmosphere is cold and forbidding. Instructors and students come for a brief hour or two, and return to their several homes. So long as this is the condition

of life at the Bussey Institution, it must continue to be what it is now. We cannot expect the number of students to increase. The Professor and Instructors may continue their valuable contributions to the science of agriculture and horticulture, but the Institution as a School of Agriculture cannot be expected to advance beyond its present position.

For the Committee,

L. SALTONSTALL.

Presented November 23, 1892.

XXXIV.

REPORT OF THE COMMITTEE TO VISIT THE
JEFFERSON PHYSICAL LABORATORY AND
THE DEPARTMENT OF PHYSICS.

January 11, 1893.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

We, the undersigned, members of the Committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the Laboratory Building on January 4th, 1893, have the honor to report as follows:—

We find a marked improvement in the arrangement and administration of the Laboratory since the date of our last report, and are pleased to note evidences of valuable original research by the Director and his associates. The apparatus connected therewith, and with the ordinary class work, bear witness to the mechanical ingenuity of the experimenters and the efficiency of the Laboratory work-shop.

We recognize the very great importance of the instruction in physical science now given by the Laboratory to the teachers of the Cambridge grammar schools; and admire the ingenuity displayed in the contrivance of simple apparatus for this special work.

We find the Laboratory library sadly in need of such standard books of reference as should be at the hand of every teacher and student of physics. The suggestion that such books are in the College Library does not meet our criticism; and we respectfully urge a special appropriation which may ensure to the Laboratory a fair working library.

We are satisfied that "The Joseph Lovering Fund for Physical Research" is bearing good fruit, and that in no way can physical science at Harvard College be advanced more surely than by a substantial increase in this fund, the present income of which is barely four hundred dollars per annum. The Director, in his report to the President of the University, indicates clearly the best conditions for research in the Physical Laboratory; and these conditions could be established immediately if a sufficient income were at his disposal.

FRANCIS BLAKE,
EDMUND WETMORE,
A. LAWRENCE ROTCH,
ERASMUS D. LEAVITT.

Presented January 25, 1893.

REPORT OF THE COMMITTEE ON GOVERNMENT.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY:—

The Committee on Government submits the following report for the calendar year 1892:—

At sundry times several members of the Committee have visited the Dean's office in Cambridge, and have personally examined the workings of the disciplinary system now in use, and the records of attendance. In our opinion, the system is working fairly well. The students are kept up to their work, and it is possible at once to determine, with reasonable accuracy, from what exercises any particular student has been absent. To carry out this system, however, requires not only good judgment and fine discretion, but also a large amount of purely clerical work. At times the force in the office has been insufficient. The Dean and the Recorder have been compelled to give time to matters of detail which should have been left to clerks, and, in consequence, these excellent officers have been considerably overworked. We are glad to be informed that at present the condition of affairs is improved; but we desire to reiterate the opinion expressed in our last report, that the present system is so valuable that its success should not be risked by overworking those called upon to administer it. In fact, the present system of doing the necessary clerical work at the offices in University Hall is a survival from the days when there were only a few hundred students in the College, and when the conditions of study and discipline were far simpler than they are to-day. The amount of purely clerical work now needed to record absences, to prepare for examinations and to tabulate their results, to send out notices and circulars, to answer the proper inquiries of parents and guardians, etc., is enormous. The machinery which does this work, hopelessly antiquated, patched in one place and added to in another, so as to meet the absolute necessities of the case, should be replaced. It is not for us to frame a new system; we have not the necessary knowledge, but we desire to urge upon the proper authorities the need of arranging the clerical work in the offices of the several Deans and Chairmen of Committees of the Faculty, the Recorder, Secretary, Regent, etc., in such a manner that it may be done promptly and without conflict, and that those officers may be free to devote themselves to the important duties which devolve upon them.

We have had a conference with the Regent concerning the scope and execution of his duties. He has been able to exert considerable influence upon the officers and members of the College societies, and in some cases the advice which he has given privately has been found far more effective than stringent rules or public discussion. No doubt there must be disciplinary rules, but, in our opinion, they do much less good than wise and tactful advice given by an officer of the College commissioned for the purpose. The College has a right to expect that the efforts of the Regent in this direction shall be strongly supported by the influence of all teachers in the College.

During the past year, the Regent has visited all students who have been ill, including many whose illness was slight and who had not seen a physician. In many cases he has induced these men to call one, and he informs us that the relations into which he has been brought with the students have been not only pleasant, but profitable in guiding them at other times.

This sort of work has never before been done systematically and, in our opinion, is necessary; but we find that the Regent, the Dean, and the Recorder are all of opinion that the appointment of an expert, as suggested by the Committee on Physical Training, might do much good both to the health and the morals of the students.

For the Committee,

FRANCIS C. LOWELL, *Chairman.*

Presented January 11, 1893.

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REPORT OF THE COMMITTEE ON GERMAN.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY :

The undersigned Committee beg leave to submit the following observations :

The Committee on German held a meeting with the Department of Instruction in German in March, 1893. The members of the Committee and the members of the Department unanimously agreed that it was essential to proper progress in German and in many other studies in the University that the changes suggested by the Report submitted by the Committee in 1892 should be made at the earliest practicable moment.

The Committee does not ignore the fact that those changes are radical, but nevertheless urges them as fundamental to a reasonable government of the University and as a necessary part of the reforms in education already begun there.

C. SCHURZ,
J. ELLIOT CABOT,
CHARLES E. GRINNELL.

Presented September 27, 1893.



REPORT OF THE COMMITTEE ON THE BOTANIC GARDEN.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY :

The present report will confine itself to a consideration of the condition and needs of the Botanic Garden, Botanical Laboratories, and Botanical Museum.

The Herbarium is to receive attention in a subsequent report, since the Curator desires to postpone the presentation of the case until autumn.

The Botanic Garden is at present in a very attractive condition. The Director, Professor Goodale, is fortunate in having hearty co-operation from the Head Gardener, Mr. Robert Cameron. The changes which have been made in the arrangement of plants are all designed to increase the facility with which teachers and pupils, both in our College and our Public Schools, can utilize the specimens. It is a pleasure to note that the Garden is visited by increasing numbers of interested visitors, and that the specimens are used by them in a most satisfactory manner.

It was the original intention of Professor Gray to employ the treasures of the Garden (as far as possible) not only for the University but for the community ; and this plan his successor is carrying out as fully as possible. The community appreciates this to a large extent, but there is still a serious drawback to complete success. An unruly element, coming chiefly from our foreign population, renders it necessary to have police protection for the Garden at certain times ; but it is hoped that this evil will ultimately be remedied.

Extensive repairs upon the greenhouses have become imperatively necessary, but it is hoped that these have now been placed in a condition which will render it possible for the Garden to avoid further outlay for repairs until the time comes when strong, iron greenhouses can be erected.

The Botanical Laboratories, equipped chiefly through the gifts of Mr. H. H. Hunnewell and Mr. F. L. Ames, have been filled with earnest students during the past year. The large elective has contained about two hundred men, while the students in all the other electives would bring the total up to nearly three hundred. It is not thought likely that any outlay will be required for the Laboratories for some years.

The Botanical Museum comprises :

First, the Ware Collection of Blaschka Glass Models, which is rapidly growing under the benefactions of Mrs. C. E. Ware and Miss Mary L. Ware. The beautiful display of incomparable models is one of the chief attractions to visitors to our University.

Second, The Economic Museum, which is steadily increasing in importance and value. The Director has already placed on exhibition specimens in one or two of the important groups of economic products, but more cases are needed for the display. It is the belief of the Committee that the construction of these ought to be undertaken at once. The cases, together with a much-needed library of economic botany, would require the immediate expenditure of about eight thousand dollars.

The Committee are gratified at being able to announce that several gifts have been made to the Museum during the present year, the most important of which was a sum of money by an anonymous benefactor for the purpose of defraying the expenses of a check list of the North American plants described in Gray's Manual. This check list is believed to be an important addition to the appliances of the department.

Miss Anna C. Lowell has continued the generous contribution of one thousand dollars to the permanent Lowell Fund for the Botanic Garden.

Among the interesting gifts has been a Giant Tree Fern, from Australia, presented by Baron von Mueller, who has defrayed all expenses from Melbourne to Boston. This superb specimen is placed in the Australian house, and proves an important addition to our means of illustration.

Hon. George W. Hammond, of Maine, has given three hundred dollars towards the purchase of a set of colored lantern slides illustrative of the vegetation of Japan. Gifts have also been received from Mr. F. H. Peabody and Mr. Walter Hunnewell for defraying the expense of printing descriptive labels and a catalogue of the Museum.

The only immediate need of the establishment appears to be a sum of money sufficiently large to permit the Director to construct the additional cases and to proceed with the purchase of a library of Economic Botany. For this imperative need, for the present year it is believed, as we have said above, that the sum of eight thousand dollars would suffice.

For the Committee,

HENRY LEE.

REPORT OF THE COMMITTEE ON THE LAWRENCE SCIENTIFIC SCHOOL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The number of pupils at the Lawrence Scientific School is to-day more than one half greater than what it was last year, three times what it was two years ago, seven times what it was five years ago, and thirteen times what it was six years ago. Also the number of special students is gradually becoming less in proportion to the number of regular students. While in 1888-89 the special students were nearly five times as many as the regular students, to-day the regular students are in the majority. Where in 1887-88 there were 14 special and 6 regular students, the School this year has 131 special and 140 regular students—a total of 271 students. (Since this report was written the number is increased to 279.)

This sudden revival of the School from a dormant condition to one of greater activity, popularity, and importance, is one of the noticeable recent occurrences at the University. It has suddenly become a fact that the Scientific School students form, roughly, ten percent of that portion of the University which receives instruction at Cambridge, with every prospect that next year it may claim a much larger proportion of the University population.

The primary cause for this rapid increase in the number of students at the School is of course to be found in the energy and devotion of the present Dean and his predecessor, as well as that of the other teachers. These have acted upon a demand, which evidently exists in strength through the country, for technical schools under academic influences. Having effectively asserted itself as offering certain advantages, the School now draws students in these largely increasing numbers. They are attracted partly by the excellence of the opportunities in the School itself, partly by those it shares with the College, partly because a Harvard diploma is desirable, partly by the agreeable life that Cambridge offers youth.

It seems fair to judge of the future by the recent past, and there seems to be no question but that the School will grow very rapidly. Popularity has been attained. Your Committee now feel alone concerned that what is offered to its students should be better and more thorough than they can elsewhere obtain.

At present the crying need that confronts the School is room in which to instruct these large numbers. The increased fees meet for the moment the calls for extra teachers and apparatus, but the quarters that have answered for a slumbering school are absolutely inadequate for the large and increasing classes. Professor Shaler tells us that the School has before it the alternative of raising the standard to such a degree as to stop the increase of numbers or of obtaining in some way a suitable building. Present needs for a few years might be met by a comparatively small three story building to accommodate the Department of Mechanical Engineering, but this should be one wing of a future complete structure that could in time have one additional section for Civil Engineering, another for Electrical Engineering, with a smaller section for Mining Engineering. On the completion of this new building the present School building would serve for the Mathematical, Astronomical, English, and other courses.

It is our duty to report to the Overseers the condition and needs of the School. We accordingly urgently point out that while the conditions are in the highest degree favorable, the needs are of the most absolute and peremptory kind. The School, in short, is afflicted with prosperity.

ROBERT S. PEABODY,
MORRILL WYMAN,
ARTHUR ROTCH,
HIRAM F. MILLS,
ELIOT C. CLARKE.

Committee to visit the Lawrence Scientific School.

Presented November 15, 1893.

REPORT OF THE COMMITTEE ON THE SEMITIC LANGUAGES.

In the death of its revered Chairman, Rev. A. P. Peabody, D. D., the Committee has lost a member whose interest in the work was ever active and whose wise counsels are sorely missed.

During the year two meetings were held, the Professors in the department also being present by invitation.

Assistance in the teaching was given by Mr. Reisner and Mr. Chester, who were also carrying on their own advanced studies in Semitic. Mr. Chester continues as assistant for the year 1893-94, while Mr. Reisner spends the year in study abroad, having been appointed to a traveling fellowship.

All the courses offered by the department were taken last year except the Aramaic and the General Semitic Grammar. There were two courses of research given for the first time, one in Assyrian and one in Arabic.

There was a marked increase in the number of students choosing Semitic subjects, particularly of the historical courses. The latter do not require a knowledge of Semitic languages. Some of these are of such large general interest, specially those relating to the Old Testament, that they are worthy of the attention of every student in the College. A growing recognition of their value and the improved facilities of the department explain largely the increased numbers in the classes. The numbers electing Semitic topics were as follows:—

I. *Language Courses*: Hebrew, 18; Assyrian, 7; Arabic, 5; Phœnician, 4.

II. *Historical Courses*: Hebrew history, 100; Hebrew literature, 17; Hebrew religion, 5; Assyrian history, 22; Bagdad Caliphate, 29.

Total, 206.

The fortnightly meetings of the Semitic Conference were well attended. At these meetings papers were read and discussed by the instructors, the students, and invited guests.

In May a course of four public illustrated lectures was given by Professor Lyon on Babylonian-Assyrian history.

Two of the students presented acceptable theses of the Ph.D. degree, Mr. Reisner and Mr. Hazard. The former passed also a

rigid oral examination, and received the degree; but Mr. Hazard was prevented by serious illness from doing the same.

Valuable additions were made during the year to the equipment of the department. Among these may be mentioned a series of oriental wall maps and a stereopticon with several hundred oriental views. The Semitic Library, which was much used by the students, received many valuable new volumes. The Semitic Museum likewise grew by the arrival of several cases of casts from abroad, and by the purchase of a fine lot of Phoenician glass and two lots of modern Bedouin and Palestinian objects.

The Committee has felt more strongly than ever the need of securing suitable quarters for the department. Last year the instruction was given in the different buildings, while the Museum occupies a room in a fourth. The problem of bringing the apparatus and the instruction together into a Semitic building has been under serious consideration. It appears that a structure adequate for present needs could be erected for fifty thousand dollars, and conditional pledges to this cause have been made to the extent of twenty-six thousand dollars. It is believed that this building would be most effective for its immediate object and from the general educational point of view if it might be grouped with others of a similar nature devoted to the other departments represented in the instruction of the University.

The vacancy now existing in the Committee should be filled at an early day, so that an efficient interest in the work of the department shall be kept alive.

All of which is respectfully submitted.

JACOB H. SCHIFF, *Chairman.*

Presented November 15, 1893.

REPORT OF THE COMMITTEE ON ZOÖLOGY.

I.

TO THE BOARD OF OVERSEERS : —

I have the honor to report as follows :

On different occasions I visited the zoölogical laboratories and lecture-rooms at Harvard, as also the galleries of the Museum adjacent. In the laboratories there were a number of students at work, the more advanced entirely alone, the others more or less closely supervised by the head of the department and his assistants, who evidently realize the necessity for training students to do their own thinking and their own work, while yet exercising enough supervision over them to keep them pointed in the right direction. In the lower classes, composed chiefly of undergraduates, the supervision of course has to be much closer, and there has to be very much more of actual pedagogic instruction. The theses and papers produced by the higher students often possess real value, and not infrequently take rank among the writings that have to be consulted by specialists in different lines of work.

There should, however, be a very much fuller and later set of apparatus used. The University ought to pay the head of each of its departments well, and allow him an ample staff of capable, well-trained young assistants to take the routine work off his hands ; and the University should not allow itself to fall behind its competitors in the kind and quantity of appliances used in the work of the students. Harvard should in every respect keep abreast of the foremost of her fellow universities, whether here or in Europe, and should profit by every improvement made.

In the Zoölogical Department special attention is devoted to microscopic work, particularly in connection with anatomical studies, and studies into the earliest and lowest forms of life, and every effort is made to profit by the experience and teachings of the Germans in this kind of scientific investigation. This is good as far as it goes ; but it must be remembered that it is only a small part of zoölogy. It will not do to neglect the work of the systematist and the outdoor faunal naturalist for purely closet work.

In addition to the present course in zoölogy, I believe that systematic work should be done in a number of widely-separated groups,

comprising the higher vertebrates as well as invertebrates. Field work also is necessary, and if impracticable during the college year, it may be carried on in vacation. Careful attention should be paid to the study of the habits and life histories of animals. In the case of advanced students, original systematic work should be encouraged — such as revisions of genera. Another important element to which sufficient heed is not paid is the study of the distribution of life, which should be taught in lectures, covering both distribution in time (paleontologic distribution) and distribution in space (geographic distribution). Such questions ought by rights to be considered more or less in connection with one another.

The anatomical microscopist has a high and honorable function to fill in the scientific world; but it is certainly no more, and is probably decidedly less, important than that of the systematist and the outdoor collector and observer of the stamp of Audubon or Bachman, Baird or Agassiz. The microscopist is merely one of many scientific workers, and proper biological work must include very much more than the study of microscopic anatomy and embryology. It is absolutely necessary for the student to be grounded in the use of the microscope; but both instructor and student should keep steadily in mind the fact that in biology, properly so called, the position of the microscope by no means answers in importance to the position of the telescope in astronomy. Yet this is a mistake into which many of our modern biological investigators are prone to fall.

The highest type of zoölogist is the naturalist, the man who loves outdoor work as well as the work of the laboratory, and who studies and delights in animals and plants, considered with reference to nature as a whole, and with regard to their own habits and inter-relationship of structure. In all our colleges, and in Harvard among the number, the modern tendency is to pay attention almost solely to work with the microscope in morphology and embryology, chiefly with regard to the lower organisms. This is a great mistake; such work should be treated merely as a portion, perhaps the preliminary portion, of the course; for this division of the science of biology is merely a division after all, and not the whole science. Until thirty or forty years ago its importance as a branch of zoölogical study was not recognized; now we go to the opposite and equally pernicious extreme of regarding it as the only important branch of the study. In Harvard the student should have practical training in systematic zoölogy, being taught to work out for himself, of course at first under competent supervision, the innumerable problems surrounding the question of genetic and specific affinities and differences, as affected by food, environment, and ancestral descent; together with the

evolution, individual variation, and distribution of species, genera and families.

It is a pity to adhere too blindly to German methods; we should take what is best in them, as in those of any other country, and profit by them, but we should certainly not take all, good and bad indiscriminately; and even the good that we do choose we should assimilate to our own ways and habits of thought.

Thoroughness, appreciation of minute investigation, and attention to detail are indispensable; and we must beware of the tendency towards hasty and superficial work, which has been the bane of certain sides of American development. On the other hand, we must strive to avoid the besetting sin of many industrious and otherwise useful investigators, that is, the inability to see the matter as a whole because of his very capacity to see the molecules of which it is composed, and the tendency to lose all capacity to do general work or draw general conclusions, and to regard the heaping up of innumerable small observations on innumerable small points as the one final end of scientific study. It is quite as important for the scientific man as for the historian to possess the power of discrimination and rejection. While he should beware, above all things, of generalizing from insufficient data and of starting to build his superstructure before having laid a solid foundation, he should also take heed not to spend his whole time in laying the foundation, and not to fall into the error of thinking that laborious and minute care in shaping a single brick is the equivalent of building a wall. Though the collection of innumerable facts is absolutely necessary as a preliminary to doing any great work, yet this great work can never be done by the mere collection of such facts; they only form the data upon which to base it. In creating specialists we should not lose sight of the fact that we must also create the conditions which may enable the greater general writers to profit by the work of these specialists; and while recognizing fully the need of the laboratory worker, we must not forget the need also of the man who can collect, observe, and record his observations, in the open; who can work both in the laboratory and afield; who is a naturalist, in the fine old acceptance of the word, and not a latter-day "biologist" — a mere histologist and embryologist.

Special attention should be paid to the Museum of Comparative Zoölogy in connection with the zoölogical courses of the University. I went over this museum with some care, and consulted Mr. William Brewster, the ornithologist, in reference to the question how it can be used and developed so as to aid in the most effective manner not only the students of natural history themselves but also the general public,

upon whose intelligent interest in scientific questions so much of the possibility of successful scientific research depends. The value of the collections in the museum to the students of the zoölogical courses hardly needs to be more than pointed out; indeed it would be more fair to call the collections *invaluable* to them. Of course for these students alone there is less need of paying special heed to the arrangement of the specimens than when the needs of the general public are concerned. In most cases the student can work best from a zoölogical specimen which is not set up in the way that it would be apt to strike the eye of an outsider. Ordinarily the scientific investigator who wishes to make a special study of some given animal will try to get as full a series of specimens as possible, from different localities, and collected in different seasons, and will prefer, if the animal is a snake or a frog, for instance, to have these specimens in alcohol; while if it is a warbler or a shrew-mouse he will wish to have before him hundreds of skins and skulls or skeletons prepared in the ordinary style, with a few alcoholic specimens likewise. But even the student, and especially the young student, can be greatly benefited and can be taught to generalize with accuracy and discrimination and to look out for certain kinds of facts by having before him as object lessons specially prepared series of animals of various kinds, arranged with reference not only to their systematic position, but also to their geographic range, associates, and environment. These special series, moreover, offer in some ways the only method of appealing to the outsider who is not a zoölogical specialist, but who is an intelligent observer and delighted to take an interest in scientific questions, if they are presented to him in a clear and attractive form. Under our democratic system of life it is difficult to overestimate the desirability, for the purpose of securing scientific work of a high character, of having a well-informed general public intelligently interested in scientific questions and with that general knowledge which would enable them to appreciate the highly specialized work of the men who stand foremost in the ranks of our scientists.

These special series, arranged on such a plan, would serve to interest and educate both the public and the general student. They might be arranged on some such plan as the following, taking at first only mammals and birds, as being the most interesting and important. Every care should be taken to give the groups of mounted specimens artistic value, rendering the beasts and birds as lifelike as possible, without losing anything of scientific value; this is a most important point. The different series should be arranged:—

1. To show the systematic position of certain groups and their relationships to one another. Both genera and family could be used

for this purpose ; the genera of short-tailed and long-tailed shrews, and the whole family of the insectivora or some group of rodents such as meadow-mice and their allies, for instance, or the thrushes, wrens, finches, and warblers.

2. To show the effect of surrounding conditions on the genera and species of mammals and non-migratory birds which range uninterruptedly over large geographical areas. Faunal maps should be used in connection with the specimens. Such genera as the chipmunks and spermophiles, and among birds the horned larks and snowbirds ; and such species as the ordinary wood rabbit and white-footed mouse, and the wild turkey, whisky-jack and spruce grouse could be used in these groups.

3. To show, by the grouping of the mammals and birds exhibited, the various phases of appearance in any given species, correlating with sex, season, age, etc. Such species as the indigo bird, orchard oriole, bobolink, and the varying hares and ermines could be used for this purpose.

4. To show the relations of mammals and birds to their breeding, feeding, and general life economics. These groups would have to be prepared with special skill. They should show the denizens of the desert, the forest, and the swamps, of mountain and lowland ; they should show the different kinds of homes and nests, as the house of the muskrat, the burrow of the woodchuck, and the widely varying nests of wood-peckers, mourning doves, song sparrows, barn-swallows, Baltimore orioles, magpies, and the like, with the eggs and young ; then different species should be shown foraging for food — minks, field-mice, hawks, ducks, vireos, yellow-birds, summer yellow-birds ; or, for instance, the battles of male moose, or the peculiar dancing rings of cock prairie fowl in the breeding season could be exhibited. Finally, special groups might be made for such species as packrats and cow-buntings, with extraordinary or aberrant habits.

5. To show the dichromatic phases which occur in many families of mammals and birds ; as among certain owls, egrets and squirrels.

6. To show what may be properly regarded as the primary life areas of the earth's surface, by bringing together typical representatives of the higher groups peculiar to each.

7. To show, by association of genera, the essential elements of the great circumpolar boreal region, with special reference to the resemblances and differences between the American and Eurasian divisions.

8. To show more in detail, in connection with faunal maps, associations of the genera and species characteristic of each of the faunal divisions of North America.

Visitors to the World's Fair can gain some idea of at least certain of the kinds of groups to which I refer by examining the various sets of mounted mammals and birds in the Government exhibit, and also those prepared by Mr. L. L. Dyche, in the Kansas State exhibit.

THEODORE ROOSEVELT, *Chairman.*

II.

The Chairman of the Committee on Instruction in Zoölogy having sent in his individual report, the other members of the Committee beg leave to submit the following:—

After visiting the laboratories and conferring with the instructors, we are of the opinion that the present scheme of courses in Zoölogy is both well conceived and well carried out. The plan restricts the student's freedom of election to certain *combinations* of courses. This restriction is imposed on account of the inter-relations of these courses with one another and with certain of the courses offered by the Botanical department. A wholesome restraint is thus put upon the student who is disposed to abuse the freedom afforded under the elective system.

The more elementary studies deal with the general morphology of animals. These courses are succeeded by those adapted to more advanced students—courses largely devoted to embryology and histology. From their disciplinary value, the adaptability of their methods to sedentary laboratory work, the important place they hold in the present phase of Science, and the wide field they offer for original investigations, it appears to us that these subjects are rightly given a place of paramount importance in the advanced instruction offered by the University. The success of the methods employed is attested by the large number of memoirs of original value produced by the students and published in the Bulletin of the Museum of Comparative Zoölogy.

Still, it seems to us that the programme of courses in Zoölogy might well be rounded out by adding an elementary course in systematic zoölogy (classification) and the distribution of animal life upon the Earth's surface. The large collections of the Museum in the exhibition-rooms adjacent to the laboratories are specially adapted to subserve such a course, which would be a valuable collateral to the morphological courses now offered and would have the further advantage, for students wishing to pursue work in systematic rather than

morphological Zoölogy, of serving as a preliminary to individual researches carried out under the supervision of the curators in charge of the special collections of the Museum.

The equipment of the laboratories appears to be fairly good though not equal to that of two or three recently established American Universities. The most pressing need in the way of equipment is a good aquarium to supply the requisite material for study.

Respectfully submitted,

CLARENCE J. BLAKE.

WALTER FAXON.

Presented November 15, 1893.

XLI.

REPORT OF THE COMMITTEE ON GOVERNMENT.

The Committee on Government herewith submits its report for the calendar year 1893:—

As in earlier years, the Chairman and other members of the Committee have visited the offices in University Hall from time to time, and have examined the books in which are recorded the choice of students' electives, the attendance at lectures and recitations, the marks at examinations, etc. The Committee had one long conference in Boston with most of the officers connected with the discipline of the College, and individual members of the Committee have often talked with the Dean and Regent about matters committed to their charge. In our opinion, the discipline of the College is not only good, but constantly improving. The students are properly looked after without being spied upon too curiously, and we believe that their feeling for the College and their instructors is at least as friendly as in the days when discipline was unduly lax. We have been informed that the time of the members of the University foot-ball team during the months of October and November is so fully occupied with foot-ball that few, if any, of them have considerable time left for study. Apparently this difficulty is not seriously felt by the members of the other teams. Limited though it is to twenty or thirty men during about a quarter of the academic year, it deserves attention from the Athletic Committees and others entrusted by the University with the management of athletics.

In other reports we have noticed the insufficient clerical force in the Dean's office, and the antiquated methods in use there. In the past year there has been an improvement. The records have been better kept, and the entries in the books have been made more promptly. Nevertheless, in some matters, there has been considerable delay. The present want of system is exceedingly wasteful of the time and energy of men like the Dean, who can be employed more profitably than in running errands, and we believe that it is wasteful of money as well.

Thirty or forty years ago, as we are informed, the clerical work connected with the government of the College was done by the President and Regent. On extraordinary occasions some one from the

Library was called in to help them. Such simplicity of administration is possible no longer. To begin with, there are at present the Dean of the College, with an office on the second floor of University Hall, the Secretary, who has a desk in the room used for the meetings of the Faculty, and Professor Morgan, with another desk in the same room. In an office on the same floor, next that of the Dean, and open to students and to the public, sit the Recorder and a clerk, incessantly interrupted and quite incapable of any systematic clerical work. In a recess not far off, and almost as much exposed to interruption, sits the Assistant Recorder, who has very important clerical duties. We understand that the health of this officer was once endangered through his working in close proximity to the only wash-bowl in University Hall. As the plumbing is now in good order, however, his position is no longer hazardous, but only extremely uncomfortable. When the Recorder wishes quiet he sometimes takes refuge in the adjoining Dean's office. When the public office is overcrowded, and even at other times, the Dean's office is not secure against interruption, and if he wishes to talk with a student in private he is compelled to retire into the President's office.

In the third story of University Hall is the office of the Dean of the Faculty, and the Dean of the Graduate School, who have between them one clerk for the half of each day. The rest of the day this clerk is the Assistant Secretary.

In another room on the same floor are two stenographers and a clerk — the latter making entries in books which are constantly used by the Dean, the Recorder, and others on the floor below, and which, therefore, occupy much of the time of the office boy, besides wasting much of the time of all the administrative officers. Often the Dean is compelled to leave men with whom he is talking on matters of the utmost importance to themselves, and of real importance to the College, and to hunt for the necessary record through half a dozen rooms on one floor of University Hall, and two or three rooms on the floor above, interrupting in this pursuit several busy officers and clerks. Such methods in any office in Boston would be considered preposterous.

The chief clerk in University Hall, if there is any, is the officer called the Recorder. This gentleman is expected to direct the clerks scattered about University Hall, taking his orders from the President, the Deans, the Regent, the Secretary, etc. During many hours of every day he must be ready to talk to the students and their parents, and he must listen to and examine all excuses for absence from College exercises and for tardiness in written work. He it is who assigns lecture rooms to the several professors and classes — a tremendous

task at the beginning of every College year. When the Recorder is engaged with the students, or is otherwise busy, officers and professors having clerical work to be done must get the attention of some clerk, always interrupting him, and often taking him from other work even more important.

When the amount of work becomes absolutely overwhelming, students are hired, to whose training the Recorder must devote himself; as the last resort, a real clerk is engaged, not to do any definite work, but to pick up the odd jobs which the clerk last hired has been forced to drop. No one unfamiliar with the routine work of the Dean's office has any idea of its extent, particularly at the beginning of the year. The elective courses taken by each student must be noted in the absence book; the elective list of each student must be checked to secure a legitimate choice of courses and hours; the freshmen admission records must be transferred from the sheets to the Year Book; the enrollment cards of each course must be alphabetically arranged and sent to the printer; the names of all students must be entered alphabetically in the absence books; the registration cards and enrollment cards should be compared; the results of the hundreds of petitions filed on the opening days of the term must be recorded in the proper books. All these things should be done in a few days. Some of them are scarcely accomplished by Christmas, some are hardly done at all. Without them the discipline of the College, upon which the College spends so much time, money, and energy, is defective. One clerk is continually answering questions; one records the changes of elective courses; one remains for everything else. The regular jobs coming in from day to day, the irregular jobs set by committees or single officers needing statistics, the annual jobs — such as entering examination marks, and preparing tables for the reports of the Dean and others — get done when, where, and by whom they can.

We do not think the Overseers will be surprised to learn that in the past two or three years the health of nearly every officer connected with the government of the College has given way once or oftener.

What is needed in University Hall is not one additional clerk, or five, but a system. In a college, even in a large college, where the course of study is fixed, rigid discipline can be maintained with a simple system. A college in which all studies are elective, if it allows the students to do as they please, may dispense with a system almost altogether. Harvard is trying to maintain both the discipline of its students and elective studies. To do this is no easy matter, for it requires not only sound and delicate judgment, but a large amount of highly-systematized clerical work. To illustrate the almost incredi-

ble stupidity of the present arrangements: the dumb waiter connecting the floors of University Hall is much too small to carry the record books, which must be constantly moved from one floor to another. Intelligent redistribution of offices, some changes in partitions, the occupation of two or three rooms now used for instruction, and a dumb waiter to carry books quickly from one floor to another, would afford great relief.

More important than these physical changes is the appointment of a chief clerk, who shall be chief clerk and nothing more, without trying to add to his duties those of an adviser of students or of an errand boy. Under his sole direction should be gathered the whole clerical force in a suitable room conveniently situated but quiet, absolutely inaccessible to the public, and nearly so to the other officers of the College.

We do not believe that such an arrangement will involve the College in any considerable additional expense. A clerk working in favorable conditions without interruption, responsible only to one superior, can accomplish much more than under the very unfavorable conditions now existing in University Hall. Even if additional expense be required to carry it out, however, a change is absolutely necessary.

In concluding we ought to say that the Dean and other administrative officers not only have made no complaint of the conditions which make their work unduly burdensome, difficult, and unhealthy, but have tried to apologize for their own hardships.

We recommend the passage of the following vote: —

“*Voted* that, in the opinion of the Board of Overseers, better provision should be made in University Hall, or elsewhere, for the accommodation of the officers having charge of the administration of the College; and that the clerical force connected with the administration should be reorganized, and its work thoroughly systematized.”

For the Committee,

FRANCIS C. LOWELL, *Chairman.*

REPORT OF THE COMMITTEE ON GEOLOGY.

The work of the department of Geology is under the charge of four members of the Faculty. Professor J. D. Whitney gives lectures in Economical Geology and in Mineral Veins and Metalliferous Products, in alternate years. This year he gives also a half-course in Geographical Methods and Results. Professor Davis has charge of the elementary and advanced work in Meteorology and Physical Geography, and takes part also in the direction of the advanced Geological field work. Professor Wolff has charge of the instruction in Petrography, both the elementary and advanced work. He also has a share in the direction of the field work which is noted in the Catalogue as Geology 22. The other courses in the department are conducted by Professor Shaler, and the instructors and assistants who collaborate with him. These courses include numbers 4, 5, 8, 9, 14, 15 and 24. Professor Shaler also shares with Professors Davis and Wolff and Dr. Harris in the supervision of the advanced field work.

The project of these courses which are under the direction of Professor Shaler is directed to the end of giving the student first, a general knowledge of the subject, which is provided in courses number 4, 5, 8 and 9, and second, a provision for special training in a knowledge and use of fossils such as is required in the theory and practice of the science.

The elementary course consists of lectures to a large class of about two hundred and fifty men. These lectures are intended to afford such a knowledge of the subject as may reasonably be desired by those who intend to make the science only a small part of an academic education. Beside the lectures, students in this course are required to attend special exercises conducted by Mr. Griswold and Mr. Dodge. These are partly recitation and partly occasions for the elaboration of difficult points. From time to time in the progress of the course special hours are devoted to the illustration of the subject matter by means of the lantern. The materials for this use are abundantly provided for by the Gardner collection of photographs and slides. A parallel course known as Geology 5 affords a laboratory training covering essentially the field of the general lectures before named.

Students who complete the above-mentioned courses may then enter either the courses in General Critical Geology, or in Structural and Dynamical Geology, which continue the same subject matter, but in a critical and somewhat investigative rather than in a didactic way.

After the above-mentioned work, which generally requires two years, and after the summer school work known as Geology S2, the students who wish to obtain a knowledge of the subject such as is fit for those who wish to plan careers in the science are admitted to course number 22, i. e., the advanced field work.

The summer courses under the charge of the department are three in number, and consist of elementary, secondary and advanced field work, though in the elementary course there are some laboratory exercises. Experience has shown that this graded work in the field is extremely advantageous to students, as well to those who pursue the subject merely for an academic end as for those who intend to follow it in a professional way.

In the portion of the department under the charge of Professor Shaler the instruction seems to be in satisfactory condition. The work, however, is seriously hampered by lack of space in the lecture room and laboratories. The instruction in five courses is necessarily given in one room, wherein the men and the materials for teaching are most inconveniently crowded.

It seems most desirable that the courses above-mentioned should be supplemented by others which may prove a much more extended instruction in Mining Geology, and the related work in Metallurgy, than is now afforded. A considerable number of students now in the University expect to be engaged in mining or in the smelting of ores, and are pursuing their studies in Geology with reference to such ends. With the addition of this comparatively small amount of instruction, the department will be able to afford, when the work is supplemented by summer experience in mines, a very fair preparation for a career in the economic branch of the subject.

The needs of room which must seriously hinder the development of the department can only be adequately provided for by the construction of the southern section in the main front of the Museum, which is intended to serve the demands of the department.

Under the direction of Professor Wolff, two courses were given last year, as usual, one a lecture and laboratory course for beginners, and the other an advanced course in original work. The first course had eighteen students and the second course six students. This is the largest number of students that have as yet taken up this branch of geological work, Petrography. Eight of these students were graduated in the scientific school and nine were undergraduates. Most of these men study this special subject for use in geological surveying, teaching or mining. Two scientific papers were published by students, and the amount of original work completed and laid aside for the present. The equipment is much improved by the addition of an electric motor for running the machinery used in preparing these

sections of rocks and fossils, and a small dynamo for use with an arc light for projection to microscopic slides and ordinary photographic slides. The collections of rocks and slides was somewhat augmented.

The needs of this sub-department are especially now with the equipment of a chemical laboratory in the basement, so that analyses of rocks can be made here and the arrangement of the exhibition room for Petrography be made to form a part of the exhibition for general geology. The rooms are ready and so is some of the material, especially part of the Chicago exhibit.

As far as regards general instruction in Physical Geography, including Meteorology, this department is in a very satisfactory condition. The rooms at its disposal are not used for any other purpose, giving exceptionally good opportunity for the collection and display of illustrative material, the fund collected from laboratory fees and received by appropriation from the corporation enabling the buying of a large variety of maps, views, models, etc. Two assistants are allowed Professor Davis: Mr. Ward in Meteorology, Mr. Griswold in Physical Geography. They make it possible for him to follow the work of the students in the elementary half-courses from week to week, and thus to assign grades at the end of each course with considerable accuracy, instead of determining that by occasional pre-announced examinations for which the students too often injudiciously cram under experienced tutors and thus defeat the real intention of the instruction. As regards higher instruction in these subjects, an advance could be made by instituting a course on the Physical Geography of the United States and of Europe, the two to be given in alternate years. There is at present no such course in college, indeed, no course in which the geography of the more important parts of the world is properly described. Such courses always make part of the higher university curricula in Germany, where much importance is given to it. This will be of great value to students of history and economics. The collections of maps, books of travel, geographies, etc., is ample for the needs of such a course.

In the opinion of the visiting committee, a course on the Physical Geography of the United States should be at once established if possible, and the course on the Physical Geography of Europe should be established the following year.

This is the most important recommendation the visiting committee have to make in their report on the condition and needs for the whole Geological Department. For some years past there has been an opportunity given to the students for research in Physical Geography and in certain branches of Meteorology. This is gradually being recognized as a serious and desirable course for students who expect to become teachers or investigators in geology or geography. It is

now taken by a small number of advanced men, and will probably grow slowly. The large collections of the department give it strength. A number of the theses presented have been published as creditable essays.

The geographical exhibition room in the Museum allotted to this subject by Mr. Agassiz is at present practically empty. About \$5,000 will be needed to fit it up with proper cases, tables, drawers, etc., for the exhibition and storage of materials. Such a room would be of great educational value, practically unique in this country, and could be so arranged that others might pattern after it. The visiting committee, however, cannot hope to do more than call attention to this at present, for in the present financial condition of the community they feel that begging for subscriptions would be a hopeless task. There is also great need in the department for a development in the way of applied or practical geography. For this purpose a young man having proper training in geography and geology, with good experience in field work, and combining with this a sufficiently artistic skill to enable him to draw and model, might be selected. He could give useful courses in this kind of work and thus educate men to become map makers in a proper sense. Such men are greatly needed by publishing houses for whom map drawing is now done by draftsmen who manifestly know very little of geography.

An instructor of this kind would go far towards preparing geographical materials for publication, and would thus contribute towards the elevation of general school teaching.

In conclusion, the visiting committee wish to state that as a whole, as things generally go, the Geological Department is in excellent condition. The points enumerated in the report, it will be noticed, are points in which advancement rather than changes are desired. But if the University is to move onward towards an ideal condition and maintain the leading position it now possesses in geography, the two courses mentioned above, Physical Geography for the United States and Europe must be added. The applied side of the study must be developed by the employment of an instructor for this subject alone, and the exhibition room must be filled with the best geographical material in the world, which teachers, students and publishers may consult; they will be quick to realize and appreciate the fact that it is to Harvard they must turn and go in order to use and get this information; and the University will be benefitted proportionately.

JOHN SIMPKINS,
CHAS. FAIRCHILD.

XLIII.

REPORT OF THE COMMITTEE ON ENGLISH LITERATURE.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE :

Gentlemen, — In pursuance of our duties as defined in section 28 of the rules and by-laws of your honorable body, we have had a conference with the members of the English Department, and by this and other means have endeavored to ascertain what relation the study of English literature bears to other studies in the University curriculum, how it is pursued and what practical means, if any, can be taken to make it more effective as an educational force.

We find a very general agreement that those who present themselves for examination at entrance are less conversant, than was once the case, with great literature ; that the habit of reading seems not to have been formed, and that it is impossible to count on any familiarity with literature which may serve as a basis for specific academic study. There is little evidence that the secondary schools at present regard an equipment in English as an important element in their work.

The University cannot, perhaps, formally correct this evil ; it is doubtful if by any requirements for admission it could very greatly stimulate the zeal of boys who are looking forward to college life. It might even be contended that the present system of specifying certain books tends still further to limit the familiarity with great literature, since by concentrating attention on these, it reenforces the habit of mind which asks for the minimum of work in preparation for admission to college. But we are convinced that the University should lose no opportunity which may offer for throwing its influence into that movement in common school education which looks to the enrichment of reading courses ; which demands that the pupil should at the very earliest stage be brought into immediate contact with great English literature, and should be held steadily to this view in all the years from the primary school through grammar and high school, so that a generous acquaintance may be had with the classics of English literature, both of English and American origin, before he crosses the threshold of the University. With an entering class thus equipped, the English Department might hope to invite at once to a spirited study of the development of literature, to an examination of the great laws of literary art, and finally to a survey of English literature in its comparative aspects.

In the absence of any such preparation for what ought to be collegiate work in literature, the students who come to the University require, for the most part, to be introduced to the body of literature itself, and two methods are in use to this end. There is a prescribed course of lectures on English literature which must be taken by all Freshmen, except the few who may have passed the admission examination in English with high credit. This course varies from year to year, but in general is occupied with some marked historic period. Its chief purpose appears to be to interest students in the general subject, and it is a lamentable sign of the defect of our whole educational system that young men of nineteen or twenty, who have been at school since they were six, should need this initiation into the most splendid achievements of their race and language.

In addition to this prescribed course, we find a voluntary course which does not count for a degree, but does in a slight measure repair the defect of which we have been speaking. One of the instructors in this department has been giving, from time to time, lectures and readings, open to all members of the University, covering in a desultory way contemporary literature, with some glimpses of the contemporary stage. The theory of the instructor appears to be that by taking up those books and plays which are most likely to be familiar to his hearers, he may be able to give intelligent direction to their appreciation and criticism, and help them in the formation of a taste for reading. It is, in a measure, an unacademic exercise, but it is a healthful and stimulating one. It is clear that under existing conditions one of the most important services to be rendered by the English Department is in arousing enthusiasm and inspiring an ardent interest in literature; and it is encouraging to be told that the students who come under the direction of the department show themselves very open to advice as to the books they should read.

We shall not attempt in this brief report to touch on the work done in the more special study of literature through the college course, preferring to confine ourselves to the single point of contact which the University makes with the students who enter the Freshman class. We might rest with the statement we have made of a generally recognized evil, but that we may not be absolutely silent regarding the possible correction of this evil, we venture, not so much to make a positive recommendation, as to offer a suggestion which is an inference from the working of the present system.

If the main purpose of the prescribed Course *Aa* is to give Freshmen a general survey of some period of literature, and to excite their interest in the study, and if the voluntary course such as Mr. Copeland has been giving, by its freedom and its familiar character attracts

large numbers of men and starts the mind in this direction, what would be the effect if dependence for this result were to be laid wholly upon the power of the department to stimulate interest and awaken enthusiasm by courses of lectures upon which attendance should be voluntary, leaving the special academic work to be done by elective courses? If such a plan were pursued the University would recognize the fact that students come up with indifferent knowledge of literature, and would seek to meet the want of bringing its best force to bear in liberalizing the minds of the newcomers and inviting them, through the attractiveness with which literature may be set forth, to enter upon this great department of human endeavor, hitherto scarcely known to them.

It may be objected to this scheme that it would be futile to look for any definite or satisfactory results from what might prove to be merely popular lectures, such as should have no place in a strictly academic curriculum. But it may be questioned whether the present system of enforced lectures, even when accompanied by examinations, goes very far toward producing that exact knowledge which distinguishes the end of academic training from that of popular illumination, and it has been fairly well demonstrated by many experiments, such as the evening readings in great authors, the courses of lectures given by Mr. Black, and the readings and lectures by Mr. Copeland, that there is a large body of students always eager to take advantage of such opportunities to acquire a cursory acquaintance with literature and literary history. These means belong to the University by virtue of its humanizing function, just as the library offers browsing ground to students quite aside from their formal occupation.

Having offered then this generous aid in supplying the defect of a previous training — a defect which we hope is but temporary — the University would be justified in offering to those students in every Freshman class who were qualified by their previous studies to undertake them, courses in the specific, academic study of single authors. If it be assumed, as we think it may be, that the reading of the student in the higher literature, up to this time, has been rather in American than in English authors, might it not be possible to offer courses in these authors which would serve not only to render this earlier reading available for purposes of scientific study, but to offer in the simplest most natural mode, an introduction to the analytical enquiry into literary power? The student who in his first year should, for example, take a course in Hawthorne, of whom he already knew something, and who was native to his thought, would thereby pass later more intelligently to the study of Shakspeare, who was less familiar and more foreign.

Moreover, the opportunity afforded by such courses would be a standing invitation to students in the preparatory schools to qualify themselves for such work. The work done in secondary schools should have distinct relation to the work that is to be done in the University, rather than to the fulfilment of the requirements of entrance examinations, and if the University offered at once courses which supposed a fuller preparation in English than now exist, the stimulus thereby given to secondary education would be healthful and natural.

In conclusion, we note with pleasure the fact that more men than formerly are working in college with reference to the teaching of English, showing both that the demand in this field is increasing, and that the English Department is developing a genuine interest. It is true that these men have college rather than the secondary school in view, but the impulse can scarcely fail to be felt in both quarters, as the college and the secondary school come into closer relation with each other.

All of which is respectfully submitted.

HORACE E. SCUDDER.

HENRY A. CLAPP.

CHARLES E. L. WINGATE.

CAMBRIDGE, MASS., April 19, 1894.

NOTE. — Mr. J. B. Warner, the fourth member of the committee, took part in the conference, but is at this date out of the country.

XLIV.

REPORT OF THE COMMITTEE ON THE OBSERVATORY.

THE most important event in the past year is the completion of the new fire-proof brick building, and the transfer to it of about 30,000 stellar photographs.

The second expedition to the Peruvian observing station has returned, and the third expedition has begun work successfully.

The expense of the second Peruvian expedition proved much greater than was anticipated, and has caused a considerable deficit in the Boyden Fund.

Fortunately the entire income of the Paine Fund is this year, for the first time, available for the use of the Observatory. Mr. Pickering's report states that :—

“Until recently the highest meteorological station in the world has been that established by this Observatory on Mt. Chachani at an elevation of 16,650 feet. After making a careful examination of the volcano El Misti, Professor Bailey has succeeded in establishing a station upon its top at an elevation of 19,200 feet. A path has been constructed by which mules have been led to the summit, and beside the meteorological shelter a wooden hut has been built upon the summit. A survey of the craters has been made, and a stone hut has been erected on the side of the mountain at a height of 15,600 feet. The temperature, pressure, moisture, and the velocity and direction of the wind are now being recorded at the summit-station by self-registering instruments. The sheets are changed at intervals, thus giving a record of atmospheric conditions at a height hitherto unattempted. The use of beasts of burden at these heights offers an opportunity in the future of carrying instruments and conducting experiments at altitudes heretofore regarded as inaccessible for these purposes. The mountain, as seen from every direction, is an isolated sharp peak. It is, therefore, especially suited for the study of the upper atmosphere.”

Mr. Pickering states that certain observations at Cambridge are each year rendered more difficult. The introduction of electric lights, especially in the vicinity of the Observatory, greatly interferes with the observation of faint objects. Additional trouble is anticipated from the proposed introduction of electric cars on Concord Avenue, which forms the southern boundary of the grounds of the Observa-

tory. A more serious difficulty is apprehended from the proposed widening of Concord Avenue, which, if carried out, would bring the cars still nearer the instruments, and would necessitate cutting down the row of large spruce trees by which the instruments are now partially protected from the dust of the road. The Committee, whilst regretting this state of affairs, sees no way of preventing the evil, which is caused by the growth of the city of Cambridge, which has surrounded the grounds of the Observatory formerly in an isolated position.

The Observatory of Harvard College now occupies two permanent and well-equipped stations, one at Cambridge, Massachusetts, and one at Arequipa, Peru. At both stations the same general system of photographic investigation is pursued, which enables a uniform plan of research to be extended to the entire sky. The examination of the photographs thus collected has led to the discovery of a large number of interesting objects, including one new star, which appeared in the summer of 1893, many variable stars, and many stars having peculiar spectra.

The need of a safe place for storage for this collection of many thousands of photographs has been met by the erection of a fire-proof building, provided by the generous contributions of friends of the Observatory, where the negatives can not only be securely kept but also conveniently studied. The importance of this building is increased by the recent construction of the Bruce Photographic Telescope, now mounted at Cambridge, but subsequently to be sent to Arequipa. The large photographs taken with this instrument require a convenient and safe place of storage even more than the smaller negatives obtained previously. The new telescope is constructed as a photographic doublet, upon the plan first tried here with smaller instruments and found superior to that generally used elsewhere.

Besides the photograph work mentioned above, the visual work of the Observatory is continued at Cambridge with the large equatorial telescope and the meridian photometer, and at Arequipa with the 13-inch Boyden telescope.

The amount of material published is greater than usual, both as regards the volumes of *Annals* and the contributions to astronomical periodicals.

We have but to express our satisfaction at the manner in which the Observatory is conducted and at the energy and devotion of the Director.

T. JEFFERSON COOLIDGE,

Chairman.

May 23, 1894.

REPORT OF THE COMMITTEE TO VISIT THE PHYSICAL LABORATORY AND THE DEPARTMENT OF PHYSICS.

TO THE BOARD OF OVERSEERS : —

We, the undersigned, members of the committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the Laboratory building on March 23, 1894. have the honor to report as follows : —

We find ample evidence of a continuance of the zeal and efficiency in administration to which we bore witness in our last annual report. Our opinion in this regard is corroborated by the fact that Second-Year Honors in Physics have been conferred this year on seven students — the largest number so distinguished in any one year up to the present time.

We note with regret that nothing has yet been done toward providing the Laboratory with a suitable reference library ; and we suggest that the recommendations of our last annual report in connection with this subject are worthy of consideration.

In compliance with the request of other members of the Committee, Professor Thomson has prepared the subjoined notes with reference to scientific investigation carried on at the Laboratory during the current year.

During the past year, the work of scientific investigation carried on at the Jefferson Physical Laboratory under the direction of Professor Trowbridge has been closely connected with the most advanced work in electricity. It has often demanded that new methods should be devised, and that special appliances should be invented for carrying on the researches. Among the subjects studied may be briefly mentioned the following : —

1st. A study of the methods of measuring the factor of “ impedance ” in electrical circuits, together with new methods for determining this quantity. A paper on this topic, describing the work carried on, is ready for the printer.

2d. An investigation by Professor Trowbridge upon the theory of “ electrical resonance.” This is a comparatively new field of work in electricity, and the results cannot fail to have greater and greater practical value. The results obtained in the photography of electrical

beats are most interesting and instructive; and, at the same time, are evidence of great skill, not only in devising methods, but in obtaining the results of their application, and in photographically recording them. This work has included a consideration of the damping out of electrical oscillations, and the experimental results and photographs are of the greatest scientific value.

The methods are akin to those which, in the hands of Professor Trowbridge, have given most beautiful results when applied to the study of the oscillatory character of condenser discharges. By means of a rapidly revolving mirror, discharges of Leyden jars in one circuit are compared with those induced by such discharges in a neighboring or parallel circuit, the capacity in which, as well as the turns of wire, may be varied. By such variations, conditions of resonance may be brought about and recorded in the photograph of the spark discharge. When a condition of complete resonance is absent, the phenomena of beating are clearly shown.

Other curious and, at the same time, most interesting and instructive actions and relations are exhibited. The scientific value of such work in a new field is very great.

A paper describing this work has been sent to the *London Philosophical Magazine*.

3d. A study has been made of the change of period of electrical oscillations on iron wires. This work and its results form the subject of a paper by Professor Trowbridge for the *American Journal of Science*.

4th. Work is being carried on concerning the behavior of dielectrics under rapid oscillations, including the measurement of their dielectric constants. This is an extended work, and involves the use of new methods obviating errors present in older methods. Practically very little is known of the subject with which this research deals, and there is room for much new and valuable work in this direction.

5th. Professor Trowbridge is also at work devising a crucial test of Maxwell's theory of displacement currents. The method of the test is to measure the work done by such displacement currents in cutting lines of magnetic force. Professor Trowbridge has confidence that his work in this direction will prove to be a valuable and important addition to the electro-magnetic theory of light due to Maxwell, and which has received so much experimental confirmation in the hands of Hertz and others within recent years.

6th. A study is being carried on by the aid of photography concerning the nature and actions of long electric sparks. This is particularly with a view to obtaining some indications of the behavior

of air under great electric stresses, such as exist with sparks of twenty to thirty inches leaping between the terminals of the apparatus. Considerable light should be thrown upon the character of gases and the state of their molecules under great electric stress.

Fortunately, we are now in possession of simple means for obtaining sparks of many feet if desired, whereas a few years ago great expense would have been involved in any such attempt. By utilizing the principles of high frequency induction, produced by condenser discharges over a comparatively few feet of wire, assisted by a spark gap and air jet playing thereon, there is no difficulty in meeting the conditions demanded in this research.

7th. The Committee were much interested in experimental work being carried on by a graduate student, Mr. St. John, in connection with the propagation of electric oscillations along wires, and the nodal points therein exhibited.

In this instance, a modified Hertzian spark oscillator was connected with two long parallel horizontal wires connected at the far end through a vacuum tube. After exploring the wires for the nodal points, it was shown that although the parallel wires were completely connected at the nodes by short wires, this did not prevent the vacuum tube from lighting by the discharge.

A very ingeniously applied method of mapping the waves on the wires, involving the use of a sensitive bolometer for indicating the intensity or energy of the waves at various points of the wires was shown, and the diagrams of wave distribution so obtained were quite interesting.

The above is an outline of the experimental work involving new methods in fields of research which are of the utmost importance in the science of physics and electricity

FRANCIS BLAKE,
A. LAWRENCE ROTCH,
ELIHU THOMSON,
E. D. LEAVITT,
WILLIAM H. FORBES,

16 October, 1894.

XLVI.

REPORT OF THE COMMITTEE ON GERMAN.

TO THE BOARD OF OVERSEERS : —

In order either to confirm or to correct the opinions held by the undersigned as to the position which instruction in the German language should occupy in the general scheme of the University, the following questions were addressed to teachers of every grade active in the various branches of the institution :

1. Is any of your work, or of the work of any student in the University under you, determined, or limited, or in any way affected by knowledge or ignorance of the German language on the part of such student, and, if so, how ?

2. Is knowledge of German required of any student in the University for admission to, or for continuance in, any study under you, and, if so, how much knowledge, and how much is it used, and for what study or studies ?

3. What proportion of the published work of yourself, or of any student, or students, in your department, is published in the German language, and, if any, in what books or papers ?

4. What remedy or remedies can you suggest for any evil suffered by the University or any student or students thereof through ignorance of, or imperfect knowledge of German.

We beg leave to submit the answers received in the original ; but, for the sake of convenience, we present also in this report, grouped according to the different branches of study, abstracts of opinions expressed, especially in response to question 1, to which we respectfully and urgently invite the attention of the Board of Overseers. It will be found that while a few of the professors, instructors or lecturers consider the knowledge of German as of little consequence to their students, an overwhelming majority of them, representing all conceivable varieties of study, agree, with singular concert of judgment, as to the desirability of that knowledge, differing only in the degree of their appreciation of it, some declaring the ability to read German merely helpful, while others pronounce it to be absolutely indispensable.

We shall now let them speak for themselves :

Professor H. P. BOWDITCH, *Professor of Physiology.*

1. I always advise students to familiarize themselves with the German language as an essential condition for keeping themselves posted with regard to the progress of medical science.

Original researches in my own department (Physiology) would be impossible without at least a reading knowledge of German.

Dr. W. McM. WOODWORTH, *Instructor in Microscopical Anatomy.*

1. Yes. Nine-tenths of my reading is German. A knowledge of German is absolutely necessary to a student of natural science, particularly biology. Not that nine-tenths of all the work is done by Germans, but nine-tenths of the *best* work. This may be an extreme view, but I believe German to be indispensable to the student of morphology.

A knowledge of German is *necessary* to every student doing advanced work in zoölogy. This applies to reading. Students are often delayed or retarded in their work by the lack of knowledge of German and cases occur where the officers of the department have aided students by reading and translating German with them, thus consuming the time of both officer and student.

Dr. F. A. DAVIS, *Instructor in Physiology.*

1. In the work of the department of Physiology in which I am engaged continual reference to German publications is necessary. German is absolutely essential to the student of experimental physiology and to the scientist engaged in original research, as most of the advances in this branch of science emanate from Germany and Austria.

Dr. G. W. FITZ, *Instructor in Physiology and Hygiene.*

1. A student is seriously handicapped if he has not a good working knowledge of German, for much of the physiological work to which he must refer is in German.

Professor W. F. WHITNEY, *Professor of Parasites and Parasitic Diseases, and Curator of the Anatomical Museum.*

1. Most of the best work is published in German and it is very necessary that every teacher and student of human or veterinary medicine should have a good practical knowledge of that language.

Professor M. H. RICHARDSON, *Asst. Professor of Anatomy.*

1. Yes. Many text-books and periodicals are written only in the German language.

Every medical student should be able to read German with facility.

Dr. BENJAMIN TENNEY, *Assistant in Anatomy.*

1. The work in the anatomical department by the average student would not be affected by a knowledge of German either way. Students who desire to do advanced work must have a reading knowledge at least.

Dr. JOHN C. MUNROE, *Asst. Demonstrator of Anatomy.*

1. Yes. My own work is decidedly increased by an imperfect knowledge of German. It is the language—a thorough knowledge of which is most important in my own reading, and it must be important to those under me who wish to consult other than English text-books.

Every graduate in medicine should be *required* to know German (and French) well enough to read ordinary medical works, at least, without any difficulty.

Professor THOMAS DWIGHT, *Parkman Professor of Anatomy.*

1. I do not think it is. I am very dependent on German for my reading, but ignorance of the language can affect my students only by limiting the range of their reading.

Knowledge of it is certainly not essential for the average student.

Professor W. T. COUNCILMAN, *Shattuck Professor of Pathological Anatomy.*

The work of any medical man is seriously hampered by a lack of knowledge of German. This is particularly the case if he wishes to undertake any investigations.

Professor A. L. MASON, *Associate Professor of Clinical Medicine.*

1. A knowledge of German sufficient for reading, at least, is of great service to students of medicine. Without this, much important recent medical literature is closed to them.

Professor T. M. ROTCH, *Professor of Diseases of Children.*

1. Some of the best work on children is published in German, and a knowledge of the language on the part of my students would enable me to refer them to German publications.

Professor J. O. GREEN, *Clinical Professor of Otology.*

1. A knowledge of the German language is of inestimable value to students in my department. The majority of the best works in my department are in German, but the few students able to use them rarely do so, because their time is so fully occupied while in the Medical School. The proportion of our students who can read German is, I think, small.

Professor J. J. PUTNAM, *Professor of Diseases of the Nervous System.*

For my own work as a student of medicine a knowledge of German is indispensable, and even for the student it is highly desirable. The teaching of medicine has fortunately reached a point where text-book instruction is no longer sufficient for such a knowledge as the students are glad to get.

All the better students have occasion to consult monographs frequently, and it is a great advantage to them to be able to consult those written in German and French, and a disadvantage to them not to be able to do so. It is especially important in the preparation of theses and reports for chemical conferences.

Dr. P. C. KNAPP, *Clinical Instructor in Diseases of the Nervous System.*

1. My own work as a student of medicine, an investigator, an instructor, and a practitioner, is dependent in very large part upon my ability to read German with comparative ease and rapidity, owing of course to the well known fact, that a very considerable part of the most valuable work in my especial branch of medicine, diseases of the mind and nervous system, is published in German.

As an example, out of eleven medical journals on that subject, which I take, four of them are German, two French, two Italian, one English, and two American, and the best of all are the German. German monographs are also as fully represented in my library.

Dr. G. L. WALTON, *Clinical Instructor in Diseases of the Nervous System.*

1. A practical working knowledge of neurology may be acquired without ability to read German. But lack of facility in this direction offers a certain impediment to the thorough student in my department, for many of the best publications, from a scientific point of view, are written in German and not all are translated.

Dr. H. C. ERNST, *Asst. Professor in Bacteriology.*

1. Yes; for the reason that a large amount of the literature of the subject which I teach is in German, and any advanced student is seriously handicapped by being unable to use that language for reading.

Dr. ARTHUR K. STONE, *Assistant in Bacteriology.*

1. Until within a few years all the bacteriological literature has been in German. In the last years, there has been a large amount of good French and English work done, besides translations of many German works. But at the present time no one could attempt to do any original investigation without a working knowledge of the German language; it is absolutely necessary, and if one could not read German he would have to employ some one to do it for him.

4. That every candidate for the Medical School should pass an examination in both German and French. This would be only a short step in advance, but would be in the right direction.

Dr. HENRY JACKSON, *Demonstrator of Bacteriology and Assistant in Clinical Medicine.*

1. I am an assistant in the department of bacteriology. A knowledge of German is necessary to obtain an accurate knowledge of original work done in this branch of science.

Dr. C. M. GREEN, *Instructor in Obstetrics.*

1. The time when the student will need a knowledge of German is after graduation, when he no longer has his instructors to keep him informed of advances made in medical science by the Germans.

All college students who intend to study medicine ought to acquire a good reading knowledge of German. Although they may in no way suffer from a want of this knowledge while they are in the Medical School, owing to the fact that most of the teachers are German taught, they will need German in after years, if they are to keep abreast with medical progress.

Dr. MYLES STANDISH, *Assistant in Ophthalmology.*

1. A knowledge of German is essential to any medical man who wishes to keep up with the literature of any branch of medicine.

Professor O. F. WADSWORTH, *Professor of Ophthalmology.*

1. No. A knowledge of the German language is of much value for collateral reading in ophthalmology but at present no student in the Medical School pursues the subject far enough to make such knowledge of any importance.

Dr. VINCENT Y. BOWDITCH, *Assistant in Clinical Medicine.*

1. The knowledge of German is most important to me in the study of medicine.

Dr. C. F. WITHINGTON, *Instructor in Clinical Medicine.*

1. Of course a very important part of medical literature is published in German and no one who wishes to go into any subject of medicine exhaustively can afford to deprive himself of the researches recorded by German workers.

Dr. EDWARD W. TAYLOR, *Assistant in Pathology.*

1. The work in which I am at present interested, viz.: The microscopic anatomy and pathology of the nervous system, demands an adequate knowledge of the German language. Recent publications in this line are written very largely in German, few of which have been or are likely to be translated into English.

4. A study of German at the University seems to me highly desirable for any student who proposes to carry on scientific work later. Even a little knowledge is often of service and should the study of the language be continued abroad any preliminary knowledge will certainly be of distinct value.

Dr. T. A. DEBLOIS, *Clinical Instructor of Laryngology.*

1. So much medical writing and research is now done by the German speaking nations, that there is necessarily a great deal of it not translated. A knowledge of German particularly in my specialty (Laryngology), is certainly of great benefit to the student.

Although my knowledge of modern languages is limited to French and Spanish, I believe that a knowledge of German would have been of infinitely more use to me than either of the above, and I think that German should be required for entrance to the Medical School from all students who have not graduated at schools which require it in their courses of study.

Professor W. H. BAKER, *Professor of Gynaecology.*

1. Scientific research by the student in gynaecology would be greatly aided by familiarity with the German language.

Dr. F. H. DAVENPORT, *Instructor in Gynaecology.*

4. As a physician I consider that a sufficient knowledge of German to be able to read medical publications in that language is of advantage to the medical man, not so much in his student days as later. German is more useful than French in this respect.

Dr. E. M. BUCKINGHAM, *Instructor in Diseases of Children.*

1. Yes. Much work bearing upon the subject which I am teaching is published in Germany; much of it soon becomes available through a good French abstract published monthly, and which has the great advantage of being condensed. I am speaking particularly of laboratory work which has a practical bearing on clinical work.

I am constantly asked by fourth-year men what to read and it is rare to find one who is willing to take up anything in German. Very likely the same men in the leisure of early practice might decide differently.

I doubt if the want of German is a serious loss to *undergraduates* in medicine; but in making a thorough study of any subject with which I am acquainted, such a study as would enable one to write a paper, one would often be hampered, and would always feel hampered, unless he could read German. It is necessary to an accomplished medical student; it is not necessary to successful medical practitioners; but I think the habit of publishing an occasional inquiry, as far as circumstances allow, puts one into a better state of mind for the ordinary work of practice. Therefore I think that a good reading knowledge of German is *desirable* for all medical men.

Professor E. C. BRIGGS, *Asst. Professor of Materia Medica and Therapeutics.*

1. A knowledge of German would enable students to read many valuable articles published in Germany and not translated.

Dr. JOHN HOMANS, *Clinical Instructor in Diagnosis and Treatment of Ovarian Tumors.*

1. Yes. A large proportion of articles on surgery are written by Germans and the German Medical Journals are very instructive reading.

Dr. WILLIAM H. PRESCOTT, *Assistant in Pathology.*

1. As a great deal of the progressive work in medicine is now being done in Germany a knowledge of German is of great value and assistance, although not absolutely necessary.

Dr. T. W. FISHER, *Lecturer in Mental Diseases.*

1. All use of German scientific and medical authorities must at present be confined to translations. And this would be the case until the whole class had a thorough knowledge of spoken German. Still, I regard ability to read German as of the utmost importance to all medical students.

Dr. E. G. CUTLER, *Instructor in the Theory and Practice of Physic.*

1. My work is the hearing of recitations in a department of medicine, but the character of the work is quite different from ordinary recitations in that the instructor does three-quarters of it, and illustrates by reference to the work of others, notably Germans, and uses sick people as illustrations (object teaching) you may say. The need of a fair knowledge of German is great, but not absolute. I would say that such knowledge of German greatly enlarges the scope of the students' ability.

Dr. FRANCIS S. WATSON, *Assistant in Clinical and Genito-Urinary Surgery.*

1. An important part — perhaps one-eighth — of the best work in my department of Surgery, as it does in almost all medical literature, comes from the Germans. Most of the progress that they contribute is sooner or later translated into English and American medical journals, or into English or American text-books. In the case of the former (medical journals) the translations are usually only summaries of the originals and are often unsatisfactory. In that of the latter long delays in translating occur and some of them are never translated. A third class of writing is very rarely translated at all, viz.: monographs and essays, and amongst these are some of the most valuable works of all.

Professor J. C. WARREN, *Professor of Surgery.*

1. German is a most useful language to me in my work. It is to medical science to-day what Latin was in the last century.

Most of my medical reading is in German books.

Medical students who are able to read German ought to have a decided advantage over those who are not able to read the language.

Professor M. H. RICHARDSON, *Asst. Professor of Anatomy.*

1. Yes. Many text-books and periodicals are written only in the German language.

4. Every medical student should be able to read German with facility. I know of no remedy except enough study of the tongue to enable him to do this.

Professor C. J. BLAKE, *Professor of Otology.*

1. Very little, as most of the German text-books (Otology) appear in English editions.

Professor E. H. BRADFORD, *Asst. Professor of Orthopedics.*

1. None, directly. Surgical investigations in Germany are of value; they are, however, quickly translated and abstracted in English and American medical journals and students are rarely debarred from thorough and careful investigations which have stood the test of six months' discussion, though they may not have access to the discussions.

A teacher, however, in surgery needs to go to the sources of information and needs German as he needs French.

Professor J. C. WHITE, *Professor of Dermatology.*

1. A knowledge of German is absolutely necessary to an instructor in dermatology, as the works of the greatest teachers and reports of the most recent advances in this department are chiefly expressed in this language. As a means of communication with a considerable proportion of the patients who make up the material of clinical teaching, it is also essential in these days of free immigration. To the student with no knowledge of the language some of the most important sources of collateral information are closed, and those who go abroad to continue their medical studies after graduation are most seriously handicapped through lack of it.

Professor JOHN TROWBRIDGE, *Rumford Professor and Lecturer on the Application of Science to the Useful Arts, and Director of the Jefferson Physical Laboratory.*

1. A reading knowledge of German is essential to graduate students in physics.

2. I do not require a knowledge of German at present, but believe that I must require it in the future for the higher courses in physics.

Professor F. C. SHATTUCK, *Jackson Professor of Clinical Medicine.*

1. It is desirable though not necessary that a medical student should be able to read German.

Professor W. L. RICHARDSON, *Professor of Obstetrics and Dean of the Medical Faculty.*

1. A medical student is greatly helped by knowing German.

Professor F. W. DRAPER, *Professor of Legal Medicine.*

1. No. A knowledge of the German language would be a valuable assistance, but it is not essential for the study of legal medicine.

Professor C. S. MINOT, *Professor of Histology and Human Embryology.*

1. Ignorance of German is a most serious disadvantage. The only good text-book of histology is in German.

For advanced students of histology or embryology knowledge of German is indispensable. I think about three-fourths of all the articles on these subjects are in German.

4. German should be taught thoroughly in every course involving scientific study or research. In science it equals in importance at least *any* other *two* languages.

It seems to me that no education of an advanced degree is complete unless it includes mastery of German.

Professor E. H. HALL, *Asst. Professor of Physics.*

1. In advanced courses of physics the student is expected to be able to read German. This is true of one or two of my courses.

Professor R. H. FITZ, *Hersey Professor of the Theory and Practice of Physic.*

1. I am in the habit of recommending German medical writings to such students as are able to read them.

A knowledge of German is not essential on the part of the student but would prove advantageous as enabling him to obtain his own impressions from writers which must otherwise be interpreted to him by the mind of another.

Dr. H. F. LEONARD, *Instructor in Anatomy, and Clinical Lecturer.*

4. None. Should any graduate desire to study in Germany, knowledge of the language would be valuable, or if any one cared to read works from that source.

Dr. ARTHUR P. CHADBOURNE, *Demonstrator of Experimental Therapeutics and Pharmacology.*

1. Probably three-quarters at least of the literature needed for original work and investigation in experimental pharmacology and therapeutics is published in the German language. The laboratory being intended for such work, is necessarily limited chiefly to students in post graduate courses as investigators. Any student would have to be able to read German or else have it translated to him.

Dr. CHARLES A. PORTER, *Assistant in Anatomy.*

1. Though I knew, while an undergraduate, that I was to study medicine, there were no courses then which seemed to me just what I wanted. I passed Freshman German on entrance and in my first year took what was then called German 11, Prose and Poetry (this was in 1885). Had there been better courses I should have continued my German till graduation; as it was I gave it up and now much regret it.

Dr. H. F. VICKERY, *Instructor in Clinical Medicine.*

1. Some good books are not available, *e. g. v.* (Jaksch *Klinische Diagnostik*).

4. For a medical man the knowledge of German is very desirable; for a first-class medical man perhaps indispensable. I can make no valuable suggestions as to changing present methods.

Dr. D. D. SLADE, *Lecturer on Comparative Osteology.*

1. The work in my department is certainly limited by an ignorance of the German language through inability to consult works and the literature generally on the subjects pertaining to zoölogy, there being much that is considered of standard authority written and published in that language.

Dr. JAMES H. WRIGHT, *Assistant in Pathology.*

1. A practical reading knowledge of the German language would be of much advantage to the medical student in the study of pathology, for the following reasons which occur to me.

(a) The best text-books on the subject of pathology are written in German.

(b) Because the more earnest students would be led to read in the original the scientific medical literature of the Germans, to whom we owe most of the advances in scientific medicine and pathology. By so doing the German methods of the study and observation of disease by which such advances have been made would become more familiar to them.

(c) Because the ability to read a foreign language usually implies a certain amount of mental training, which is desirable in medical students.

As to my own work, I would state that a reading knowledge of the language in question is indispensable.

Dr. ALGERNON COOLIDGE, JR., *Clinical Instructor in Laryngology.*

1. Not seriously. The number of English text-books for collateral reading in English is more than sufficient for a one-year's course in my subject. Some of the charts and illustrations which I use, have an explanatory text in German, but no student is practically hampered by this, especially as most of the anatomical names are Latin.

I believe that a physician needs a knowledge of German much more after graduating from the Medical School than while in it. If the student enters the School without such knowledge it seems hardly advisable to spend time on it to the exclusion of other work, but I should advise him to take it up in earnest after graduating when he has more leisure. Everything possible should be done to encourage men who expect to enter the School to devote attention to it.

Dr. J. W. FARLOW, *Clinical Instructor in Laryngology.*

1. A knowledge of German is very useful to me in keeping up with the literature of laryngology. Most of the original work is done by Germans and it is a great help to be able to read the works in the original, rather than some short, and perhaps incorrect, abstract.

I have a good many German patients, especially at the hospital, who speak very little English.

Dr. G. H. WASHBURN, *Clinical Instructor in Gynaecology.*

1. Not directly, but it is a very valuable acquirement for anyone studying medicine to be able to use German. Many of the centres for the study of medicine abroad are German speaking, and there is much valuable medical literature published in German about which it is of value to keep informed.

I should consider it a good thing for anyone contemplating the study of medicine to take a course in German in the academic course.

Dr. EDWARD REYNOLDS, *Assistant in Obstetrics.*

1. Ability to read German periodicals and other literature is of value.

Dr. FRANKLIN DEXTER, *Demonstrator of Anatomy.*

1. My own work could not be carried on at all without a fair knowledge of German. The work of students under me is, to say the least, limited without this knowledge.

It seems to me that every man about to enter the medical profession should have a knowledge of German. The greater that knowledge, the better off he is.

While a student, the English text-books may answer his purpose, but later on he will find that he will meet with great difficulties without a knowledge of this important language.

A student can get on very well with English alone but as soon as he graduates German becomes essential.

Professor C. P. LYMAN, *Professor of Veterinary Medicine, and Dean of the School of Veterinary Medicine.*

1. No; excepting that its possession is of very great personal advantage to the student.

Dr. H. S. PARSONS, *Instructor in Mechanical Dentistry.*

1. A knowledge of German would not assist the students in doing the special work in which I give instruction, and a knowledge of it would not affect his standing in any way; neither would it assist me in any way that I know of.

Dr. H. A. KELLEY, *Instructor in Operative Dentistry.*

1. The men under me are not required to have any knowledge of German, and the only help the language would be to them is the help it is to any broadly educated man. The most valuable literature in my profession is written in the English language and most of the advance in the profession is made by the English speaking people, so that German is not the help to our students that it is to the medical students.

Professor THOMAS FILLEBROWN, *Professor of Operative Dentistry.*

1. In the Dental School, German is not used nor required, consequently the work of students under me is not affected by knowledge or ignorance of that language.

Dr. D. M. CLAPP, *Clinical Lecturer in Operative Dentistry.*

1. A knowledge of German would give the dental student the power to read many articles and books of a professional and scientific nature published in that language.

The responsibilities of the dentist and the requirements placed on him by the public are increasing so rapidly that it has now become imperative that his natural abilities, education, manual and mental training be the highest and most thorough possible. A knowledge of German would be the same, or nearly the same advantage to the dental student that it is to the medical student.

Professor C. L. JACKSON, *Professor of Chemistry.*

1. All men working at chemical research must have a good reading knowledge of German. Without this, work would be very much hampered, if not limited. I think I might say that really thorough work would be often impossible without it. German is necessary for the student to obtain a proper knowledge of most of the work which has been previously done in his field.

Professor E. S. WOOD, *Professor of Chemistry.*

1. It would be impossible for me to keep up with the times in medical chemistry and to teach this subject satisfactorily without being able to read German. The same is true of any teacher in my department.

Every student intending to take up scientific studies of any kind, and particularly if he intends to study medicine, should be encouraged to study German so as to be able to read it fluently.

Dr. WILDER D. BANCROFT, *Assistant in Chemistry.*

1. Practically all the work done in physical chemistry has been published in German, and as very little of it has been translated, a knowledge of that language is indispensable.

2. As the course of lectures which I give is optional, there is nothing required. All the references are to publications in German, as well as all text-books, so that the ability to read German easily would be required, if I were giving a regular course.

Dr. JAY B. OGDEN, *Assistant in Chemistry.*

1. The work of the student in chemistry, more especially medical chemistry, is to a certain degree interfered with by ignorance of German, because some of our best medical works are in German, and comparatively few, one might say, have been translated.

For a more thorough knowledge of his work he should be able to read technical German. I may instance my own case as a medical student and the manner in which I was handicapped by an inferior knowledge of the language.

The current medical literature is largely written in German, and if a graduate is determined to "keep up with the times" he must have a knowledge of this language.

Professor H. B. HILL, *Professor of Chemistry.*

1. A knowledge of German is expected in the more advanced work in Chemistry. Most of the current work in organic chemistry is first published in German periodicals. My pupils have usually had a sufficient preparation in German.

Professor J. P. COOKE, *late Erving Professor of Chemistry and Mineralogy, and Director of the Chemical Laboratory.*

1. I think not, — at least in the case of good scholars.

4. I do not think that the reading of literary German is of much value to the students of chemistry as an aid in chemical studies.

The course in scientific German and a command of the vocabulary of the usual scientific terms is very important, and I recommend my students to limit themselves to the reading of scientific books unless they have a literary taste. I do not think it would be wise to require more German than is now demanded for the A.B. degree.

Dr. T. W. RICHARDS, *Instructor in Chemistry.*

1. A very large part of the literature of chemistry is printed in German, and ignorance of the language is a serious hindrance to the advanced student. A number of men under me usually suffer more or less from this deficiency, and in consequence take more or less of my time for extra instruction.

Mr. ELLIOT F. ROGERS, *Instructor in Chemistry.*

1. My work is in chemistry and it is almost needless to state that nearly half of its published work is in German. Therefore a knowledge of the language is absolutely necessary.

Professor N. S. SHALER, *Professor of Geology and Dean of the Lawrence Scientific School.*

1. The work of all the men in the classes in geology above the grade of the first year, or elementary courses, depends in some measure on an ability to read German; for the evident reason that much of the literature is in that language.

Mr. RICHARD E. DODGE, *Assistant in Geology.*

1. Inasmuch as the course in which I am an assistant is an elementary course in geology, the work of the students therein is in nowise affected by their knowledge or lack of knowledge of the German language. I would say that I am somewhat personally bothered in my studies by the lack of an ability to read scientific German with ease. I always found the German vocabulary a difficult one to master, though I have a very good French one. Hence facility in reading German is an accomplishment I lack. The knowledge of German is very valuable in petrography and palaeontology, and no one can be a fine petrographer without a good working knowledge of German.

Mr. R. T. JACKSON, *Instructor in Palaeontology.*

1. As an instructor in palaeontology I would say that a knowledge of German is most desirable for students taking courses in this subject. The best text-book on the subject is a German work and is in the laboratory for constant reference. While German is most desirable for students taking the first course offered in this subject, namely, Geology 14, it is much more important, I may say essential, for students taking the course in advanced palaeontology (Geol. 24).

For the course in historical geology (Geol. 15) as at present conducted, it is not needed as much as in the two other courses, because American geological literature includes nearly all the books used or referred to in the course.

Mr. THOMAS A. JAGGAR, *Assistant in Petrography.*

1. Unquestionably yes. A student of petrography must understand German in order to read with intelligence the most important literature of the subject — that published in Germany. The same is true of all scientific specialties.

It is not "required" in the University schedule of courses, but should be. For it is rare that the phrase, "A knowledge of scientific French and German is desirable," deters students without such knowledge from taking the course.

Professor G. L. GOODALE, *Fisher Professor of Natural History, and Director of the Botanic Garden.*

1. In my advanced course (research in the field of systematic, physiological and economic botany) a good working knowledge of the German language is expected. Without it, our students would be greatly hampered.

Professor W. G. FARLOW, *Professor of Cryptogamic Botany.*

1. It is *desirable* that all students under me should be able to read German. It is *necessary* for all in the advanced courses.

Mr. N. T. KIDDER, *Instructor in Botany.*

1. If any one wishes to keep abreast with the discoveries in the higher branches of botany, a knowledge of German is very desirable.

Mr. HERBERT M. RICHARDS, *Assistant in Botany.*

1. Ignorance of German would decidedly hinder the work of any student in special research in Botany.

For the needs of this department a reading knowledge of scientific German seems to me to be essential.

Mr. ARTHUR SEYMOUR, *Assistant in the Cryptogamic Herbarium.*

1. My work is the care for the cryptogamic herbarium and to look after the literature of American mycology.

There are no students in the University under me, therefore there is nothing for me to report upon in regard to students.

For my own work German is an every day necessity; my knowledge of that is not satisfactory but I make it answer. A large share of the most important books and articles relating to cryptogamic botany are published in German, as are also a considerable number of special papers.

Professor E. L. MARK, *Hersey Professor of Anatomy.*

1. It is next to impossible for students to carry on successfully any line of *research* work which they are likely to undertake, without sufficient knowledge of the German language to enable them to get at the meaning of ordinary scientific prose. It is not often that I have students otherwise sufficiently advanced who do not meet pretty well this requirement.

In the undergraduate courses the students are continually referred to books and articles in German for information, which often cannot be had elsewhere. In some courses special topics are assigned; the most of these require familiarity with German; and when the student pleads his inability to make use of German, topics, the literature of which is principally in English or French, have to be selected. The importance and necessity of German is forced upon the student's attention from the beginning of his zoölogical work.

Mr. G. H. PARKER, *Instructor in Zoölogy.*

1. I have charge of two courses in zoölogy which are taken mostly by juniors, seniors, and graduates. In both these courses the best text-books and many of the more important papers to which the students are referred, are in German. Those students who are unable to read German are at a decided disadvantage in doing their work.

Mr. WINFIELD S. NICKERSON, *Assistant in Zoölogy.*

1. It is not necessary that students in elementary courses in zoölogy shall be able to read German, though it is of advantage to them to consult text-books in German.

In more advanced courses than that with which I am associated, a reading knowledge of scientific German is very useful and in research work in zoölogy is well nigh essential.

Dr. C. B. DAVENPORT, *Instructor in Zoölogy.*

1. My work and that of my students is in zoölogy. This science has developed more in Germany than in any other country; the best periodicals are German, so are the best indexes to the literature. The greatest teachers are in Germany; the method of the science is being most rapidly developed there. These facts indicate the way in which the knowledge or ignorance of German must affect zoölogical students. Research students, especially, must have access to the literature of their work. They are greatly limited if they do not have a full acquaintance with German. They ought to go to Germany to complete their preparation for research by learning German methods of teaching and investigation.

Mr. W. C. SABINE, *Instructor in Physics.*

1. During the current year the work in none of my courses is affected by the students' knowledge or ignorance of the German language. In a new course, however, to be given next year, a fair reading knowledge of German will be desirable but not indispensable.

Mr. LEON S. GRISWOLD, *Assistant in Physical Geography and Geology.*

1. In my own work it is often necessary to refer to German works and it is a matter of great regret that I did not give more attention to the study of German while in College, for it is a difficult matter now to make up the deficiency.

The course of German "1c" would have been of great benefit to me had it existed in my time, and I think it should be recommended to students who intend to study science. This course should give sufficient preparation for any needs in courses with which I am connected.

Professor B. O. PEIRCE, *Hollis Professor of Mathematics and Natural Philosophy.*

1. I do not see how an advanced student can pursue any subject in mathematics or physics thoroughly unless he can read German.

The results of a large part of the world's scientific work are printed only in German, and for a bibliography of even the *English* literature of any part of mathematics or physics one must go to German publications like the "Fortschritte der Physik" and the "Fortschritte der Mathematik" in which all papers on these subjects in whatever language they may have been written originally are named and reviewed.

I am compelled to set the students in my courses somewhat below the height which I might expect my students to attain if I could be assured that they have some facility in reading "scientific German." A student of experimental physics ought to get the gist of 30 to 40 pages of plain writing in German in an hour.

Professor W. F. OSGOOD, *Asst. Professor of Mathematics.*

1. In work in the advanced courses in mathematics, knowledge of German is indispensable. In many subjects the text-books to which reference is made, and nearly all the articles in mathematical journals pertaining to these subjects, are in German. A "reading knowledge" of German, as it is often called, such a knowledge as the student who takes up German in his Freshman year acquires at the end of that, or perhaps even the Sophomore year, is inadequate, for such a student is obliged to translate what he reads instead of understanding it in the original, and thus the language demands so much of his attention that it is difficult for him to understand the substance of what he reads.

Mr. J. L. LOVE, *Instructor of Mathematics.*

1. My work is mainly the conduct of the courses in pure mathematics in the Scientific School, and covers the subjects, algebra, solid geometry, plane trigonometry, analytic geometry, differential and integral calculus. For my immediate work in these subjects a knowledge of German is not necessary on the part of the student: since there are abundant books of reference in English. Yet an ambitious student who desires to go more thoroughly into the higher researches of these subjects will find a knowledge of German to the extent of being able to read the language, of immense value, on account of the access to memoirs and treatises which are otherwise closed to him.

But the work of a mathematical student in the Scientific School, is not in any serious way "determined, limited," or "affected" by knowledge or ignorance of the German language within the present scope and aim of these courses.

Professor W. E. BYERLY, *Professor of Mathematics.*

1. In one of the higher courses of mathematics which I give this year the students need to read German with a fair amount of ease.

Professor ARTHUR SEARLE, *Phillips Professor of Astronomy.*

1. I have no students in charge. In my own work ability to read German fluently is indispensable. I have no practical occasion to write or speak the language.

Mr. WILLARD P. GERRISH, *Assistant in the Observatory.*

1. In general, my experience has indicated that a knowledge of the German language is often desirable in connection with abstract research, in view of the scientific activity in Germany and the publications resulting therefrom.

Professor J. M. PEIRCE, *Perkins Professor of Astronomy and Mathematics, and Dean of the Graduate School.*

1. I cannot say that it is. I expect my students to be able to make use of German text-books and memoirs, when necessary. Of course I should be glad to have the students do so with more ease than at present, and still more glad if the references could be to English or French authorities.

Mr. R. DEC. WARD, *Assistant in Meteorology.*

1. A knowledge of German on the part of the students would enable them to do outside reading in German text-books and periodicals, but such reading could not be *required*, as the literature in English is more than sufficient for any elementary course in meteorology.

Mr. A. L. ROTCH, *Assistant in Meteorology.*

1. Not being an officer of instruction of the University, I can only reply to (1) as it relates to my own work in the science of meteorology. For the study of this, a knowledge of German sufficient to enable the student to read easily text-books and periodicals is absolutely essential.

Prof. W. M. Davis bears testimony to this in the frequent reference to German literature in his class instruction.

Professor I. N. HOLLIS, *Professor of Engineering.*

1. Students of mechanical and electrical engineering find a reading knowledge of German very useful, but not absolutely necessary. There is no doubt that a knowledge of German, in so far as it enables a student to read the technical literature, is one of the elements of success in the profession.

Mr. G. S. RICE, *Instructor in Sanitary Engineering.*

1. I think the students would be much better equipped for their engineering work if they could read German.

Mr. C. A. ADAMS, *Instructor in Electrical Engineering.*

1. It is very desirable for students in electrical engineering to have a good reading knowledge of German and although they all study elementary German they are not sufficiently familiar with it to make any considerable use of it. The best men, however, do make use of it, even though it be hard work at first. Although, as I have said, such a knowledge of German is desirable, yet in my opinion the greatest advantage derived from its study is the better facility in using the English language thereby derived, rather than the actual ability to read German intelligently.

Professor J. B. AMES, *Bussey Professor of Law.*

1. In the near future I shall probably give a course upon "legal history" in which students will find a knowledge of German useful, but not essential.

Professor J. H. BEALE, JR., *Asst. Professor of Law.*

4. Though a knowledge of German is not directly useful to a law student in this country, one who would get the best knowledge now possible of the origin and the history of our law, and especially of its relation to other systems of law, must of course be able to use German books. I regret my own inability to do so. If every undergraduate were given facility in the use of German books, he would be much better prepared to take up the investigation of any branch of knowledge.

Professor F. W. TAUSSIG, *Professor of Political Economy.*

1. In the work of all my advanced courses, and especially in the course on economic theory, I am hampered by the fact that the students, otherwise well equipped, cannot handle German.

Professor C. F. DUNBAR, *Professor of Political Economy and Dean of the Faculty of Arts and Sciences.*

1. In public finance and banking the work is so far affected that I feel it practically useless to require the reading of anything which cannot be paralleled in French or English; and although I make references to German sources, it is with the feeling that they will be used by only a part of the class. This often makes it necessary, in order to cover a German topic with certainty (as *e. g.* in Taxation), to give it a disproportionate amount of time in my lectures. I must add that the state of things appears to me to be improving.

Professor W. J. ASHLEY, *Professor of Economic History.*

1. In all the higher University work with which I am concerned, in the study of economic and social history, it would be a great advantage to the men to have a fair acquaintance with German.

2. In "The History of Economic Theory down to Adam Smith," to read German is declared in the department pamphlet to be "desirable." In a class last year of some eight seniors and graduate students, two, if I remember rightly, showed that they could use German with ease, and one of these did an excellent piece of work for me and the class which would have been impossible otherwise.

Professor F. H. STORER, *Professor of Agricultural Chemistry and Dean of the Bussey Institution.*

1. As a teacher of agricultural science, my work in the University is largely dependent on that of German investigators. Without the German language I could do comparatively little as a teacher. I have always urged upon students at the Bussey Institution that they should learn enough German to enable them to read readily memoirs and year-books relating to their profession, and I have induced many of them to do so.

MR. GEORGE P. WINSHIP, *Assistant in History.*

1. In general historical work German is most essential. My own experience is that students who become versed in German before entering college have a great advantage over those who take it up later,—although possibly the condition of the German department during my freshman year may in part account for my feeling.

MR. ARTHUR M. DAY, *Assistant in History.*

1. In my own work as a student of history, political science, and economics, I find myself hampered somewhat by inability to read German *easily*.

Professor EDWARD CHANNING, *Asst. Professor of History.*

1. Yes. A knowledge of German on the part of all the students in Government 11 would be of considerable value.

Professor P. H. HANUS, *Asst. Professor of the History and the Art of Teaching.*

1. A man who is unable to read German easily is cut off from nearly all but the most elementary literature in the theory and history of education.

2. It is impossible to require knowledge of German in my courses. Most of my students are graduates; many of them teachers of experience. In most instances such men are unable to use German as an instrument, because the modern language instruction offered by colleges where these men were educated was inadequate, or because its importance was not sufficiently insisted upon either in admission requirements or college courses, or both.

Professor CHARLES GROSS, *Asst. Professor of History.*

1. At the beginning of the year I ascertain which students can read German easily. About 10 per cent. of the class, *i.e.*, about five or six out of fifty or sixty, generally answer in the affirmative.

4. I believe the establishment of a course dealing exclusively with the history of Germany and requiring considerable collateral reading, would not merely fill a gap in the instruction now offered by the department of history, but would also help to stimulate the study of the German language.

Professor JOSIAH ROYCE, *Professor of the History of Philosophy.*

1. All students of philosophy, after their first year of elementary work in the subject, stand in very great need of German as a tool to use in all their further work. I am constantly hampered in dealing with them by their difficulties as to German. Their present frequent inability in undergraduate years to use it as a tool lowers their work by a full third from what it ought to be.

Professor EPHRAIM EMERTON, *Winn Professor of Ecclesiastical History.*

1. The whole teaching of history is very seriously limited by the almost universal incapacity of our students to use German books. I continually urge my students to learn to read German by using it in their historical study.

4. (1) An increased ability in German upon entrance. (2) A combined effort on the part of other departments to make students use German books.

Professor F. W. PUTNAM, *Peabody Professor of American Archaeology and Ethnology, and Curator of the Peabody Museum.*

1. The lack of knowledge of German affects the study in this department, but does not in any way limit or determine the study.

While I certainly consider a knowledge of German as of importance, I do not consider that it is in this department of as great service as Spanish and French. Therefore I should advise the study of German without requiring it.

Professor G. H. PALMER, *Alford Professor of Natural Religion, Moral Philosophy, and Civil Polity.*

1. In my seminary Phil. 20c, and in advanced ethics Phil. 4, a knowledge of German would greatly profit my students, while I find many of my students have sufficient knowledge to use German books, I can never presume this knowledge in the case of any student. If I could, my own instruction might take a wider range.

Professor WM. JAMES, *Professor of Psychology.*

1. For my own work German is indispensable. For my students, especially in psychology, it is almost equally indispensable, and their insufficient ability is one of my chief hardships as a teacher.

2. Not required yet, for it would reduce the students to three or four. It ought to be required however.

Professor HUGO MÜNSTERBERG, *Professor of Experimental Psychology.*

1. The psychological laboratory work which represents in the catalogue the course Phil. 20a, and which is open only to graduates, should have as a presupposition a fair ability to read scientific German literature. Fourteen graduates take it, most of them for three courses devoting almost their whole time to it, but only four men, who have studied in Germany, read German books easily. There is no doubt for me that all the others are seriously hampered by their insufficient knowledge of that language in which more than half of the psychological literature is written. To be sure all the men had a little German, but as the purpose of the course is original research, it would be often necessary to go over the literature of a subject purely as introduction, that is to look perhaps over some dozen magazine articles, etc., and I cannot expect this from men who need a whole evening to read ten pages of German; an insufficient knowledge is therefore not much better for my courses than no German at all. I myself don't emphasize these points in my courses because I am a German, and don't wish to appear to the students as

exaggerating the value of my own language, especially as I am myself a beginner in English; but there is no doubt for me that a requirement of the ability to read German without friction would be for psychological laboratory courses just and right. We can miss French much more. For my psychological lectures German would be desirable but not necessary.

Dr. BENJAMIN RAND, *Assistant in Philosophy.*

1. In the years 1891-94 I have examined the work of the students in Phil. 1 (now Phil. 1a and Phil. 1b), Phil. 3, 12, 15 (1891-93), and Phil. 4 (1894), and have likewise devoted special attention to the literature of philosophy.

For excellence of work in Phil. 1 (a and b) German is not necessary. In Phil. 3, 12, 15, and 4, a knowledge of German would always be of advantage. It is only the occasional student, however, who exhibits in his theses that *readiness* in the use of German for his philosophical investigations, which is undoubtedly desired alike by your committee and by the instructors. Possibly all, or nearly all, the advanced students have some knowledge of the German language; but their acquaintance with it, on the whole, does not appear sufficient to induce them readily to apply their knowledge by consultation of the German authorities. An unmistakable preference is for the most part given to English sources of information. Nevertheless, such is the extent and richness of the German philosophical literature, that every possible encouragement should be given to a more thorough use of the German language. Under past methods of instruction the applied knowledge of German appears to fall just short of effectiveness for work in philosophy by advanced students. It is this extra amount of attention necessary for the *practical* use of the language, that needs, it would seem, to be supplied.

Professor J. H. THAYER, *Bussey Professor of New Testament Criticism and Interpretation.*

1. Some knowledge of German is so important a requisite in a rounded theological training that the ability to read the language — after a fashion — has for many years been demanded with us of candidates for the degree of B.D.

Professor D. G. LYON, *Hollis Professor of Divinity and Curator of the Semitic Museum.*

1. For students who intend to become scholars no subject offered in the University, except English, is so important as German. In

citing German works in my lectures I am always aware of a serious loss on the part of those students who are ignorant of the language.

While the courses of instruction are so conducted that they may be pursued by students who are ignorant of German, the best results cannot be obtained by such students for the reason that many of the most useful books in my subject are in German.

4. I doubt not that a better grade of work would be made possible in the higher courses of instruction if a good reading knowledge of German were a requisite to the pursuit of such courses. For myself, I lose no opportunity to urge on students the importance of this language.

Professor F. G. PEABODY, *Plummer Professor of Christian Morals and Acting Dean of the Divinity School.*

1. Much of my work would be more effective if I could freely use German sources. One course (Phil. 14, Philosophy of Religion) is drawn almost wholly from German sources. I can demand from the class, however, only what is translated.

Professor C. E. NORTON, *Professor of the History of Art.*

1. In all advanced study of the history of the fine arts a knowledge of German is essential. Even for beginners the best text-books are in German or are translations from the German.

So, too, much of the most important writing on Dante is in German ; but the language is not indispensable for the student.

Professor C. H. MOORE, *Asst. Professor of Design in the Fine Arts.*

1. A working knowledge of German is of much value to students in my subject. It is not, however, in all cases indispensable.

Professor J. K. PAINE, *Professor of Music.*

1. In my courses I find a knowledge of German very desirable, but the majority of my students are not able to read the language. It would be a great advantage if the students in music could read the German text-books on musical theory, and, above all, the literature of musical history and criticism, which in German far exceeds that of any other modern language.

MR. H. L. WARREN, *then Instructor in, now Asst. Professor of Architecture.*

Many of the most valuable technical and historical works on architecture are written in German and it is of great advantage to be able to refer the students to them. At present I am able to do this only to a limited extent. In laying out the new courses it will be my hope that the student shall acquire a reading knowledge of German as early in the course as possible. I have some thought of reading a German text-book on architecture with the students in the architectural department during some part of the four-years course, if such a course is permanently established, in order to familiarize the students with the technical language of their special *Fach*. This is done in the architectural department of Columbia College, I believe, with considerable success. If it were possible to require a reading knowledge of German before entering the course, it would be a great help; but at present this would probably not be desirable.

Professor F. D. ALLEN, *Professor of Classical Philology.*

1. Not only are most of the best manuals in the various departments of classical antiquities in German, but so are nearly all the periodicals in which yearly, monthly, and weekly progress in our science is registered, and a great many of the best explanatory commentaries on Latin and Greek authors.

2. Not formally required. But I always assume it, and those who do not possess it are seriously hampered. In some courses (as the classical seminary) it would be impossible to do the work at all without German. As to the amount of knowledge, I should say that ability to read easy prose rapidly and without a dictionary, and hard prose with a dictionary is about what is needed. Of course a knowledge of classical terms, used by writers on classical subjects is necessary, but these are mostly Greek or Latin terms which explain themselves. As to what courses, I should answer: *All* the courses in *classical* philology marked "Primarily for Graduates."

Professor M. H. MORGAN, *Asst. Professor of Greek and Latin.*

1. Every student of the classics must find himself limited and hampered if he is not able to use German works of reference and editions of the authors with German notes.

Professor J. B. GREENOUGH, *Professor of Latin.*

1. Two or three courses which I ordinarily give almost require a reading knowledge of German. A few of the good scholars possess

that, but the great majority are as helpless as a fish out of water.

2. It is not now required, but in view of what I have said under the last question I hope to require it hereafter in Latin 10 and in Class. Phil. 20.

MR. WM. F. HARRIS, *Assistant in Classics.*

1. To advanced students in the Greek and Latin courses a good reading knowledge of German is indispensable. Few of the men who take these courses know at the outset that they should take a number of German reading courses. I should think that timely announcement of this would be well, in the German and classical pamphlets, and that a profitable course or half-course might be arranged to kill two birds with one stone. Some semi-popular works in philology, history, or criticism might be read and some classic with German notes and introductions might be studied, as Kiessling's *Horace*, Bergk or Christ's *Histories of Greek Literature*; or some such books could be read. Of course, the only trouble would be to find a man who could handle such a course in a way to do justice to both sides of it. But I imagine this would not be so very hard.

PROFESSOR C. L. SMITH, *Professor of Latin.*

1. In the regular undergraduate courses in Latin, especially the more advanced, a reading knowledge of German is of advantage, but is not required. In the graduate courses such knowledge is indispensable, as it is in my own work.

4. The elementary courses should be taught in smaller sections. The examination in elementary German for admission to college should include a test in the *writing* of simple German.

DR. W. N. BATES, *Instructor in Greek.*

1. My own special investigations into classical subjects are carried on with the constant use of German books and periodicals. The ability to use German books of reference and annotated editions of Greek authors would be of great value to most of my students.

MR. C. P. PARKER, *Instructor in Greek and Latin.*

1. Often I have some more advanced course, for juniors, seniors, or even graduates, *e. g.*, Juvenal, Pliny, Roman Stoicism. In these courses students might no doubt consult German notes, or such a book as Zeller's with advantage. But most of their work ought to be

done with the Latin text itself. Moreover, Zeller is translated. The same is true of Teuffel's valuable history of Roman Literature, which they need to consult at times.

Professor W. W. GOODWIN, *Eliot Professor of Greek Literature.*

1. Every student in the higher courses in the classics here is much hampered and often seriously embarrassed if he cannot refer to German authorities. There is hardly a subject which I teach in which the best books of reference are not in German; and I constantly tell students that, if they cannot read German easily, they must be content with inferior books.

2. They must read Meier & Schömann's "Attischer Process," a book of about 1000 pages, or a great part of it. There is no other book from which they can get the required knowledge.

Professor A. R. MARSH, *Asst. Professor of Comparative Literature.*

1. A reading knowledge of German is absolutely indispensable for students taking all higher courses offered by me. These are Comp. Lit. 1, 2, 21, 22. More than half the books used in these courses are in the German language, and I cannot admit to them students unable to use these books. Practically none of the books used are in English, for as yet English speaking scholars have written next to nothing of value upon the subjects treated.

2. All attention given to writing and speaking German, except for the sake of obtaining accurate grammatical acquaintance with the language, is a waste of time for the student so far as my work is concerned.

4. I do not think, however, that students sufficiently appreciate the importance of this tool, and I should like to see fuller statements of it, in connection with our announcements.

Professor C. H. TOY, *Professor of Hebrew and other Oriental Languages, and Biblical Literature.*

1. In many cases seriously restricted by ignorance of German, the best reference books being in certain subjects, in that language. Almost without exception I refer students for themes and theses and for general study to German works, without which a full investigation of the subject cannot be made. Comparatively few students can do thorough research work on account of ignorance of German and French.

In research courses knowledge of German is required in the Divinity School; it is required for the degree of D.B.

Professor LEB. R. BRIGGS, *Professor of English and Dean of Harvard College.*

1. Not now; for now I have no regular classes. I talk to the Freshmen every other week in connection with their work in rhetoric. In one of my old elective courses German was useful but not absolutely necessary.

Professor F. J. CHILD, *Professor of English.*

1. With my class in old English (English 4) I use Mätzner's "Alt-englische Sprachproben" far the best book for the subject, and an ability to read ordinary German is indispensable for those who elect English 4. German is also desirable for those who take English 1 (Chaucer), since much that is valuable has been written on Chaucerian matters in German.

Professor ADAMS SHERMAN HILL, *Boylston Professor of Rhetoric and Oratory.*

1. No more than by knowledge or ignorance of any other language that has a literature.

Dr. A. C. GARRETT, *Instructor in English.*

1. A large part of my own work, most of the more scientific work, requires intimate acquaintance with German. My facility in it is none too great (though adequate) because too little time has been given to acquiring the language.

Of the five courses in which I teach, only one requires knowledge of German on the students' part, viz.: German Philology 13 (Old Norse). I have met no serious obstacle in students' knowledge. Occasionally one would not know the meaning of a German word which defined a Norse word. In English 3 (Anglo-Saxon) German is very desirable for comparative purposes, and in both that course and English 1 (Chaucer) very desirable in referring to philological works for elucidation, parallel reading, etc., but for neither course is a knowledge of German required.

Professor G. L. KITTREDGE, *Asst. Professor of English.*

1. This is so inclusive a question that I hardly see how it is possible for any instructor (except some of those engaged in teaching in the most elementary courses) to answer it in the negative. Advanced work in any department must, of course, constantly throw German books and articles in the students' way, and ignorance of the language is then, of course, a disadvantage. Even when a student can "get

along" in a course without knowledge of German, his work may be and in most cases will be "affected" (for the better) by such knowledge. For my own purposes I desire, and, in fact, am obliged in some courses to require such a knowledge of German as will enable the students to use German books with facility, not merely occasionally but constantly.

Mr. L. E. GATES, *Instructor in English.*

1. A reading knowledge of German is required of students who take English 20a.

Mr. B. S. HURLBUT, *Instructor in English.*

1. My work, English H and L, is affected in only one way by German. Occasionally I find a fellow who has read or talked German so much that he brings the German style into English composition, and his English suffers accordingly. The remedy, however, is simple. I set him to work to read and write English. Cases of this sort are not very common.

Mr. W. T. BREWSTER, *Assistant in English.*

1. My work being wholly in English composition, the effect of German on the themes which I correct can be only indirect. I sometimes think that students occasionally catch tricks of German style, but the amount of the German influence can hardly be measured and is, to my thinking, less palpable and harmful than that of the Latin.

Professor FERDINAND BÔCHER, *Professor of Modern Languages.*

1. The study of French is only indirectly affected by knowledge or ignorance of German. It is, however, very desirable that every student, whatever linguistic or literary studies he may pursue, should have a knowledge of the German language sufficient to use it. I find that in general, of late years, students in the higher courses of French have such a knowledge.

Professor R. L. SANDERSON, *Asst. Professor of French.*

1. No; except inasmuch that the knowledge of one language beside one's mother tongue may be said to help in the acquisition of a second foreign language.

4. That no student be allowed to take a course in which German books are read, — history, philosophy, etc., — unless he has done the equivalent of two years' German in Harvard. The equivalent

might be reading done by the student alone, a thing not so difficult to accomplish for anyone who has mastered the rudiments, and is in earnest.

Professor F. C. DE SUMICHRAST, *Asst. Professor of French.*

1. A reading knowledge of German is desirable for work in courses on literature. As a matter of fact most students taking such courses have at least a fair reading knowledge of the language.

Professor B. H. NASH, *Professor of Italian and Spanish.*

1. In the advanced courses (Spanish and Italian) a fair reading knowledge of the German language is of great value. Much of the best critical and expository work on the Spanish and Italian classics is published in German, and of this very little is translated into English. Valuable works on the history of Italian and Spanish literature, especially monographs on particular periods or particular branches, such as "The Drama," "The Origins of the Literature," etc., are in the same case. If the student can be referred to these works his resources are greatly enlarged and the instructor is saved the time that he would be obliged to devote to making the contents of these books available to the student. The best bi-lingual modern dictionary of Spanish is Spanish-German, German-Spanish.

Professor E. S. SHELDON, *Asst. Professor of Romance Philology.*

1. The question only arises in connection with the courses in Romance Philology in my case. There it is necessary to use German books somewhat, and I think the tradition is fast becoming established that students taking these courses must be able to use books in German.

4. Much practice in reading at sight in the elementary courses in German. This is, I suppose, already one of the means employed in these courses.

In this remarkable array of professional opinion the statement frequently recurs that a "reading knowledge" of the German language on the part of the students would greatly facilitate the work of the teachers by enabling them freely to refer their pupils to German authorities, and would also greatly aid the students by enabling them to enlarge their reading with ease, — yet that such knowledge is in many cases not absolutely necessary to the students so long as they are still under the guidance of their teachers, for the reason that the teacher may be assumed to be capable of supplying what the students.

for want of that knowledge, may not be able to find out for themselves, — but that the knowledge of the language becomes actually indispensable to the students, or at least to those of them who have the ambition of keeping abreast of the progress of the time in the various departments of science in which they are engaged, as soon as they leave that guidance behind them and have to fall back upon their own resources. This is undoubtedly true. It is at the same time a most cogent reason why the University should see to it that its students, before it sends them forth into the world, should be well equipped with so needful a tool of study. The quantity of positive knowledge which even the best institution of learning can impart to its pupils, is necessarily very limited. So much more important is it, that it should cultivate and develop in them to the highest possible degree the ability to learn more.

It will be observed that the opinions elicited from the officers of instruction without the department of German bear almost exclusively upon the usefulness of a knowledge of German as a means to facilitate further study. It is hardly necessary to add that such knowledge will also be apt greatly to benefit the student by introducing him to German modes of reasoning and methods of inquiry, which enjoy a well-deserved reputation for comprehensive grasp and conscientious thoroughness, and by opening to him a literature other than scientific which abounds in the richest treasures. In both respects it is likely to aid in the development of tendencies most beneficial to the character of the mental activities of our people.

What is actually aimed at and accomplished in the German department of Harvard University is set forth in the following statements made by the professors and instructors employed in it in answer to the following questions: —

1. Please state generally or particularly the object which you try to accomplish with the students in your courses in the University.
2. Please state the actual results.
3. In your opinion (and with reference to the German language) what changes, if any, should be made in methods of instruction or examination, or in requirements for admission to the University, or for degrees in any department of the University, and what are the facts and reasons which lead you to that opinion?

PROFESSOR GEORGE A. BARTLETT, *Regent, and Associate Professor of German.*

Question 1. Please state generally or particularly the object which you try to accomplish with the students in your courses in the University.

Answer. I have now (owing to the duties of "Regent"), but one course, an elementary course composed of Freshmen who passed the elementary examination for admission. My purpose is a twofold one.

(1) I desire to teach the students in such fashion that at the beginning of their Sophomore year they may be able to read *ordinary* German with some degree of ease.

(2) It is expected that the *better* men in the course, may, in their Sophomore year be able to pursue, with profit, course 2, 3, or 4, and with this end in view they are given a great deal of practice in writing German and in committing to memory extracts from German authors (in prose and poetry).

Question 2. Please state the actual results.

Answer. About one-third of the men in Course C learn to read German well and to write easy translations into German correctly.

Question 3. In your opinion (and with reference to the German language), what changes, if any, should be made in methods of instruction or examination, or in requirements for admission to the University, or for degrees in any department of the University, and what are the facts and reasons which lead you to that opinion?

Answer. I have no suggestions to make regarding the methods of instruction or examination in German in the University, believing they are as good as we can make them under existing circumstances.

Regarding the entrance examination I have two points to touch.

(1) I believe that the requisition for Elementary German should be strengthened by the addition of a test in grammar and in the translation of easy English sentences into German, and that the time given to the examination should be extended to two hours.

My reasons for this are that the present test is an insufficient one and leads to slovenly and "cramming" preparation.

(2) It seems to me that the whole scheme of our admission examinations would be improved if the *Advanced German* were accepted as a substitute for *Elementary Greek*.

My reasons are two-fold. (1) A great many students desiring to devote themselves largely to the study of Natural Science, History, Sociology, Political Economy, and kindred subjects need an advanced knowledge of German at the very beginning of their college career.

(2) It would be of advantage to the student and to the language itself (as a means of mental training) if Greek were begun in college when the student is already master of Latin, French, and German, and his mind is mature enough to appreciate and take advantage of the *Greek training*.

Dr. MAX POLL, *Instructor in German.*

Letter in reply to the said three questions to the department of German.

In German *A* I try to teach the student so much German as to enable him to read easy prose or poetry at sight, to acquire a correct pronunciation, to be well versed in grammar, and to know the most important rules of the syntax as well as to translate easy English sentences into German. In order to accomplish this, much time, one-third about, is devoted to grammar and composition. In reading, my principle is (1) not to translate a word that has not been read; (2) in the first months to translate every word of the lesson prepared at home, later in the year only the difficult passages, and to read at sight as much as possible. In order to improve the pronunciation poems are learned by heart and recited in the classroom. As to the actual results I venture to say that the average student finds no difficulty in understanding a book written in easy German and knows the principal elements of grammar well. In regard to composition I am sorry to say the result is unsatisfactory, probably on account of the insufficient time that we can devote to it.

In German *B* I pursue the same principles as in German *A*. As this course, however, is meant to prepare students for third year German in one year, the number of books read during the year is considerably larger and of more difficult style. Not only a great deal of English is translated into German, but during the last part of the year the student has to write short themes in German. As the majority of the students of this course enter either 2, 3, 4, or 6, in which lectures are given in German, in which they have to take notes, I try to make the sound of the German language more familiar to the students' ear by dictating to them short stories. The object of this course is (1) to prepare in one year beginners in German for 2, 3, 4, or 6, or to enable students to use German text-books in other studies. I think that the intelligent student finds his preparation in German *B* adequate to his wants. German 2 is meant to give the student a detailed knowledge of Lessing, whose principal works are read, while the minor works of Lessing, or such as are not suitable for being read, are dwelt upon in lectures. The course, however, does not restrict itself to the writings of this one poet, but it tries to make the student acquainted with some of the standard works of other authors and with the history of literature of the classical period. I am pretty sure that the average student, after having taken this course, is well able to read any work in German literature, and I trust that his interest in German has been sufficiently awakened so that he will continue his studies in this particular line.

Mr. ALFRED B. NICHOLS, *Instructor in German.*

Question 1. Please state generally or particularly the object which you try to accomplish with the students in your courses in the University.

Answer. (1) In German *A* my methods and results coincide so nearly with those concerning which Dr. Poll has made a somewhat full statement, that I beg to refer the Committee to that statement.

(2) In German *1b* the year is devoted to training in reading more difficult (historical) prose. Attention is paid to the text in the noting of synonyms, of derivation, etc., as far as such things have a practical value towards forming a vocabulary. Much is read at sight, and the students are constantly drilled in giving in their own words the *thought* of the author, both orally and by written work in the classroom.

(3) In German *E* the object is the study of the grammar and simple prose composition.

(4) In German *6* the same methods are followed on the whole as in *1b*, the course being a more advanced one in the same line. The subject matter is historical during the first half-year, while in the second literary and esthetic criticism is taken up. The course deals with as difficult German as the student is ever likely to come across. No translating is done, and the student is expected to master the authors' ideas and be able to reproduce them in his own words.

Question 2. Please state the actual results.

Answer. (1) In German *A* I will again refer the Committee to Dr. Poll's account.

(2) In German *1b* the student is able to read more difficult German with some ease by the end of the year.

(3) In German *E* (which is resorted to largely by men deficient in their grammar) the result is the ability to write simple prose that is grammatical though not very idiomatic.

(4) In German *6* the men reach a point where they feel themselves sufficiently masters of the language to depend on themselves in their further prosecution of it. They obtain incidentally more knowledge of German history and some insight into German habits of thought.

Question 3. In your opinion (and with reference to the German language) what changes, if any, should be made in methods of instruction or examination, or in requirements for admission to the University, or for degrees in any department of the University, and what are the facts and reasons which lead you to that opinion?

Answer. I do not know that I can add anything of value to what has been already discussed with the Committee. The department is much at one, I conceive, on the evils resulting from insufficient preparation, from the size of the sections, and other points, recapitulation of which seems superfluous.

Dr. HEINRICH CONRAD BIERWIRTH, *Instructor in German.*

Letter in reply to the said three questions to the department of German.

As most of my work is elementary and introductory to the higher courses, I try above all things to encourage the student and to show him that by dint of a little hard and faithful work from the start he can soon attain some tangible results, *i.e.*, get so far as to read easy German without constant thumbing of the dictionary and without a surfeit of grammar. But, since I am also firmly persuaded that everybody who desires to make German really useful as a tool must sooner or later master certain grammatical forms and syntactical constructions, — I never neglect to point out to the student where his failure to understand the context is obviously due to his lack of grammar, and thus to convince him that he would be none the worse off for knowing something more about forms and inflections. This *argumentum ad hominem* if put home kindly and without reproach or censure, so as not to humiliate the student too much, I find persuasive and effective. It often reconciles him to the much tabooed subject of grammar when he comes to see the good and the necessity of it, and it really prepares him in a more thorough way for difficulties which he is sure to meet in advanced work and which, if encountered without such preliminary training in the science of language, are apt to discourage or even upset him later. In this general method and practice I have been confirmed by my experiences in German C, our intermediate course. How easy it is to prepare boys for the minimum admission requirement in German, where no grammatical knowledge is insisted on, is evident from the fact that there are always students in Course C who have prepared for the entrance examination, not in a year, but in three or four months. This year I even have a student who managed to do it in three weeks. On the other hand, it is very hard to make students whose grammatical training has been neglected for the sake of preparing them quickly (and, of course, only superficially), gather up the loose threads and do in the second year what ought to have been done once for all in the first. It is disheartening to both teacher and pupil. In my opinion, therefore, it would be no more than common justice to the student if we insisted in our admission examinations on a modicum of grammatical knowledge which would oblige the candidate to prove that he is not merely guessing at the sense of a given passage, but that he also knows what he is about and is prepared to go through the second year's work without laying the foundation over again.

Dr. BENJAMIN LINCOLN ROBINSON, *Instructor in German.*

Question 1. Please state generally or particularly the object which you try to accomplish with the students in your courses in the University.

Answer. The object of German 1c, the course under my charge, is to assist scientific students to a ready and practical *reading* knowledge of average technical German. Experience shows that among the students who take the course the chief requisite for the end in view is a more copious and accurate vocabulary. Accordingly, special attention is given to drill in and discussion of technical terms in German with their exact English equivalents. Breadth and accuracy of vocabulary are the first aims of the course. An effort is also made to interest the students in the subject matter. When this is done their German progresses much more rapidly and with much less conscious effort. To this end questions and brief and informal discussions are encouraged in the class.

The accuracy of the student's reading knowledge is constantly tested by translations, both written and oral, of sight selections as well as set passages. Beside these, diagrams are frequently required of scientific apparatus described in the German text as well as accurate chemical formulae, etc.

Question 2. Please state the actual results.

Answer. At the end of the year about half to two-thirds of the class can read accurately, at sight, the German of average scientific text-books in the subjects of which they have the requisite scientific knowledge to understand the subject matter. The remainder of the class, with few exceptions, can do the same with a slight use of the lexicon.

Question 3. Answer. No suggestions.

Professor HUGO K. SCHILLING, *Asst. Professor of German.*

Question 1. Please state generally or particularly the object which you try to accomplish with the students in your courses in the University.

Answer. German A. — Object: To give the students a thorough knowledge of the outlines of German grammar (accidence and the main points of syntax); to accustom them to correct pronunciation (on their own part as well as on the part of the teacher, that is, both in pronouncing German words and in identifying words pronounced by the teacher); and to enable them to read simple German prose at sight and to translate easy English prose into German.

German 3. — Object: To give the students a general knowledge of German classics of the 18th century and a thorough acquaintance with the life and works of Schiller; to enable them to understand connected lectures in German; to train them to read German classics intelligently and appreciatively without translating them; to arouse in the student an interest in German literature generally; and to stimulate independent thought and criticism by means of themes on literary subjects usually connected with the reading.

German G. — Object: Practice in writing German themes, with special reference to advanced syntax and to the cultivation of a good style in addition to grammatical correctness.

Germanic Philology 18. — Object: The elucidation of the texts most commonly read in the study of the various Germanic dialects, by means of the discussion of the public and private life of the Teutons.

Germanic Philology 20b. — Object: Critical study of middle high German texts and original investigations by the students.

Question 2. Please state the actual results.

Answer. In regard to the actual results of the work in these courses, it is safe to say that the objects above stated are, on the whole, successfully accomplished.

In German A no student is allowed to pass who cannot read simple prose at sight with considerable facility, or who is not familiar with the main facts of German grammar; there are always some students in each class who will make practically perfect translations from the German, and into German, in the mid-year and final examinations. There are also, of course, some who take the course only because it is required and who do not exert themselves sufficiently to become very proficient.

In German 3 the students acquire considerable facility in the reading of German classics and in the writing of themes; they learn to understand German lectures and to take notes in German; they do a great deal of outside reading, of which they have to give an account in occasional tests, as well as in the general examinations; in the class room they answer questions concerning the reading in German and explain difficult passages, as a rule, without translating them.

In German G the work is, on the whole, very satisfactory, the men who take this course being, almost without exception, very much in earnest. The themes are creditable pieces of work, and though even the best students will occasionally make grammatical mistakes, the average theme shows on the other hand a gratifying command of words and phrases, considerable skill in constructing German periods and a frequently surprising familiarity with idiomatic expressions.

Germanic Philology 18 and 20*b* are new courses and have not yet been given.

Question 3. In your opinion (and with reference to the German language) what changes, if any, should be made in methods of instruction or examination, or in requirements for admission to the University, or for degrees in any department of the University, and what are the facts and reasons which lead you to that opinion?

Answer. (*a*) In German *A* the number of instructors should be larger; the sections should not contain more than, at most, 30 students each; in elementary work, classes of from 40 to 50, as at present, are entirely too large.

(*b*) The present admission examination, requiring, as it does, only the translation of simple German prose, is inadequate; the paper should include at least a few easy English sentences for translation into German.

PROFESSOR HANS CARL GÜNTHER VON JAGEMANN, *Asst. Professor of German.*

Letter in reply to the said three questions to the department of German.

In reply to the questions asked by the Committee on German concerning the aims and results of my teaching, I beg to state, in the first place, that my work, as at present arranged, is not so homogeneous that I could give the same answers with reference to the several different courses I am now conducting.

(1) The most elementary of my courses, designated officially as 1*a*, is a course which immediately follows the beginners' course *A*. The object which I try to accomplish in this course is to lay a sound linguistic foundation for the higher literary courses to which students pass from my course, so that when they enter those courses they may be able to read German classics as literature and not as a series of sentences illustrating grammatical principles or idioms. I also try, by exercises in writing from dictation, to accustom the student to the sound of the language when spoken, so that he may the sooner be able to follow lectures in German in those higher courses. In addition to this, weekly exercises in German composition accustom the student to express himself in German with some degree of readiness and accuracy on every-day topics and enable him to begin, in the higher courses, the writing of German compositions on easy subjects connected with his reading in German literature. As regards the results in this course, they can best be estimated by the grade of work that can be and is accomplished in the courses of the next

grade with the students that pass out of my course into these higher courses (officially designated as 2, 3, 4, 6). For my own part, I can only say that I think the results are commensurate with the labor expended; they are all that can be expected of the average Harvard student after a two-years' study of a difficult subject like German.

(2) My other courses are all of a very advanced grade; their object is the study of the older stages in the history of the German language and literature. They are not intended as courses giving a student a reading knowledge of modern German, or a practical command of the language, or an introduction to German literature. They presuppose a sound knowledge of modern German, and they stand in the same relation to the courses in modern German and modern German literature as the courses in Anglo-Saxon, Early English, and History of the English Language, to the courses in Modern English Literature and English Composition. They are intended for men who want to fit themselves to become teachers of German and specialists in German Philology. It would be difficult for me to summarize the results accomplished in the various courses otherwise than by stating that in my opinion the objects of the courses as stated in the department pamphlet are accomplished.

(3) In regard to the requirements for admission, I wish to call attention to the fact that the German department, in connection with the French department, several years ago proposed to the Faculty to raise these requirements by the addition of a requirement in grammar or composition. This proposition was defeated. Since then, the Conference on Modern Languages, under the direction of the Committee of Ten, of which President Eliot was chairman, have proposed these same requirements (see their report, p. 102). As it is generally hoped that the recommendations made in this report will sooner or later go into effect in all the secondary schools in the country, it would seem natural that Harvard should be one of the first institutions to aid this movement, by compliance with the above recommendations, in making them the basis of her admission requirements. These recommendations, both as to Elementary and Advanced German, are in accordance with my ideas.

Professor KUNO FRANCKE, *Asst. Professor of German Literature.*

Letter in reply to the said three questions to the department of German.

I beg to submit the following statements in answer to your circular of March 2, 1894:—

1. The first question calls for a statement of the aims which guide me in my work as a teacher of German literature at this University. Let me say at the outset that my own University training under men like Giesebrecht and Paulsen, as well as my subsequent position as "Mitarbeiter" on the "*Monumenta Germaniae Historica*," have forced upon me the conviction that the most fruitful way of studying a given literature is to look at it as an expression of national life rather than as a linguistic phenomenon or a manifestation of individual genius. The whole aim of my activity at this University I, therefore, find in giving to the students under my instruction as clear a conception as I can of German literature as a reflex of German life. In order to do this successfully it is necessary to consider literature in its connection with other forms of national life, in its relation to the social and political conditions of the masses, to the great religious and philosophical movements, to the leading tendencies in the fine arts, to the ideals of culture dominating the successive stages of national development. It would be clearly a vain attempt to introduce the student at once into the midst of this complicated organism of interdependent intellectual forces. The only rational method is a gradual approach toward it. My work, therefore, begins with a course (German 4) of a biographical character, of which Goethe is the central figure, while the other great literary men of the classical period of the 18th century are considered as leading up to him or revolving about him. The next stage consists in a course (German 5) in which the whole development of German literature from the earliest times to the end of the 18th century is brought out, mainly in its relation to the corresponding social and political development. The old Germanic epics, for instance, are here treated as a reflex of tribal life at the time of the migrations, the middle high German epics and lyrics as a reflex of the culture of mediaeval chivalry, the literature of the 15th and 16th centuries as a reflex of the growth of the middle classes, the literature of the 17th century as a reflex of princely despotism, the literature of the 18th century as a reflex of the movement for individual liberty. There follows a course (German 9) dealing with German literature and art from the 13th to the 16th century. Here I try to show how the whole literary and artistic life of the German people for three centuries tends toward the crowning achievement which is finally reached in the Reformation; the delivery of the individual conscience and intellect; how the inner life asserts itself against traditional conventions, and the direct truthfulness of the *Volkslied* and the *Miracle Plays* in the satire of the *Schwank* literature, in the realism of painting and sculpture from the Van Eycks to Peter Vischer and Dürer, in the ascetic self-observation of

the Mystics, in the joyful self-exaltation of the Humanists, — until Luther by combining all these single tendencies into one mighty stream revolutionizes the whole system of mediaeval hierarchy. At the end of this line there stands a course (German 11) in which I consider the main public tendencies of German life from the middle of the 18th to the middle of the 19th century, as reflected in literature. The transition from the individualism and cosmopolitanism of the age of Herder, Kant, Schiller, and the early Romanticists, to the collectivism and nationalism of Fichte, Hegel, and the later Romanticists; the effects of the Napoleonic wars and of the Restoration upon literature, and the intellectual movements leading to the revolution of 1848, form the main topics of this course. Somewhat aside from this whole series of studies there stands a course (Germ. Phil. 19) in which I endeavor to trace the history of the Faust legend through its multiform ramifications down to Goethe's Faust, except that here also I emphasize the effect which the various stages of civilization and the different ideals of culture, through which this legend has passed, have had upon its character.

2. As to the second question of the Committee's circular, asking for a statement of the actual results of my teaching, this is a question which it is impossible for me to answer satisfactorily. As far as the number of students goes, my courses are naturally handicapped by the fact that, with the exception of Course 4, in which at least a part of the work is devoted to German theme writing and the translation of difficult passages, the ready use of the German language both in reading and for the purpose of taking notes, is presupposed in all my courses. Keeping this in mind, it seems to me that the attendance in these courses may be called satisfactory. Last year the numbers were as follows: —

Ger. 4.	Ger. 5.	Ger. 9.	Ger. 11.	Ger. Phil. 19.
68	49	18	14	3

This year they are: —

72	45	12	11	5
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The second, *i.e.*, this year's list, includes 10 graduate students.

It seems to me that in gauging the efficiency of the *language* instruction given in the department, these figures of the distinctly *literary* courses ought to be carefully considered. They certainly ought to have as much weight, if not more, as the testimony of other departments about the readiness of their students in using the German language.

Of palpable results of the instruction in German literature in this University, I may mention that during the last four years the Sohler

prize, a prize to be awarded to the best essay dealing with some phase of modern European literature, was twice won by a student in the German department; and that this year's volume of the "Studies and Notes in Philology and Literature," an official publication of Harvard University, contains a doctor thesis on "Expressions of German national feeling before Walther von der Vogelweide," by one of our graduate students, Professor Carruth of Kansas University.

3. With regard to the third question of the circular, I fully agree with all that has been said at our various conferences with the Visiting Committee in favor of raising the German requirements for admission to the University. I would also suggest that the Committee recommend the gradual abolition of instruction in elementary German at this University. This is a function which properly belongs to the secondary schools, and the mere existence of such courses in the College must tend to lower the position of the department as a whole in the eyes of the college community. In view of the fact that at present very little attention is given to German in the schools, a complete and sudden abolition of these courses in College is, of course, out of the question. But I see no reason why they could not even now be deprived of their compulsory character. There exists at present an elective course in elementary German (Course *B*) which requires more work than the compulsory course (Course *A*); and although it is taken by a very much smaller number of students than the latter, I have a strong impression that it is on the whole taken by very much better men.

Finally, I would call the attention of the Committee to the fact that the regulations for Honor examinations in Germanic languages have recently been changed so as to include a reading knowledge of Latin and at least an elementary knowledge of Greek. It seems only reasonable to expect that the Honor examinations in Greek and Latin will accordingly be changed so as to include at least a reading knowledge of German.

(*Second letter.*) Allow me to add one more argument in favor of the abolition of prescribed elementary German (Course *A*) in Harvard College, a suggestion of which I made in answer to your circular of March 2.

According to the President's Report for 1892-93, the total number of Freshmen in the German department during that year was 284. Of these, 143 took the prescribed course in elementary German (Course *A*); 141 took elective German courses (*B*, *C*, 1*a*, 1*b*, 1*c*, *E*, *F*, 2, 3, 4, 6).

The total number of Sophomores in the German department during the same year was 228. Of these, 85 attended courses recruited from Course *A* (1*a*, 1*b*, 1*c*); 143 attended courses not recruited from Course *A* (*B*, *C*, *E*, *F*, *G*, 2, 3, 4, 6, 5, 9).

It is clear from this that the vast majority of the students¹ pursuing second year's studies in German consisted of men who had not taken Course *A*.

In the year 1893-94 there were 86 Sophomores in Courses 1*a*, 1*b*, 1*c*, — the courses recruited from Course *A*, — a fact showing that more than a third, namely 57, of the 143 Freshmen of 1892-93 who began German as a prescribed study dropped it in the Sophomore year.

The natural inference from these figures seems to be (1) that the German department does not need Course *A* as a source of supply for the elective courses offered by the department; (2) that for a considerable proportion of students the work spent on prescribed elementary German is a mere waste of time.

While these reports are calculated to create a favorable impression as far as they go, it is to be gathered from many of the opinions expressed that, although a certain advance is to be noticed, a greater and more general proficiency in German among the students is very desirable. As to the question how the deficiencies that may exist might be remedied, the answers received in response to our interrogatories differ. They may be divided into the following classes:—

1. Those recommending that students be admonished by way of suggestion and advice, in the official reports and pamphlets as well as in personal conversation, to devote more attention to the study of the German language.
2. Those recommending that the requirements as to German in the examinations for admission to the University be increased.
3. Those recommending higher requirements as to German for admission to scientific schools, and for honors and degrees; and
4. Those recommending special courses for scientific German to be connected with the different scientific departments.

These different recommendations do not necessarily exclude one another, as, indeed, they appear grouped together in one or two of the answers we have received to our interrogatories. The admonition

¹ *I.e.*, a total of 284 (141 Freshmen, 143 Sophomores); against a total of 85 Sophomores pursuing second year's studies in German, who had taken Course *A*.

by suggestion or advice, as well as the establishment of higher requirements in German for certain honors or degrees, might prove desirable incentives under any circumstances. But a careful consideration of the whole subject has led us to the conclusion that the recommendation of an increase of the initial requirements deserves the most serious attention. The more Harvard rises to the station and dignity of a University in the higher, — that is, the true sense, — the less the institution should have to do with that kind of work which naturally belongs to the office of the preparatory school. The student entering Harvard should be required sufficiently to possess what may be called the mechanical equipment necessary for the pursuit of his studies. This, applied to the German language, would mean that the Harvard student should be beyond the struggle with its structural difficulties, that he should be able to read it understandingly without the painful drudgery of conscious translation word for word, and that in using it his labor should be reduced to a mere occasional enlargement of the vocabulary.

We admit that it may be very difficult, if not impossible, to reach this objective point all at once. But it may ultimately be reached by gradual approaches. We venture respectfully to suggest as the first step, a public announcement that the requirements as to German in the examination for admission, will henceforth be increased by degrees, and that elementary instruction in German at the University will be discontinued.

We further suggest that the time for the examination in German be extended to two hours and that it include, in addition to the translation of German prose, not of the simplest kind, but of ordinary difficulty, the translation of a few sentences of simple English prose into German, or a simple composition in German, and some ordinary tests in German grammar. The examination should certainly be severe enough not to permit the attainment of a satisfactory result by cramming.

We believe also that the recommendation made by several of the officers of instruction concerning the establishment of special courses in "scientific German" in connection with the respective scientific schools, deserves to be seriously considered. If, as sources of information, German works are to be read, it is most important that they should be read understandingly. The meaning of writers who are studied as authorities should not be merely guessed at. This is one of the cases in which "a little knowledge" is more dangerous than none at all. The particular study of scientific terminologies appears especially necessary with regard to German writers because, as is well known, not a few of them — whether writing on science, or philosophy, or

even history, — take great liberties with their language in constructing composite words and in various other ways, thus creating, to some extent, technical terms, or forms of expression which, when applied to certain things, are to convey a special meaning — more or less peculiar to themselves. The courses suggested would, therefore, serve a useful purpose.

We would also respectfully recommend that in courses in which recitations form part of the system of instruction, the classes be divided into sections conveniently small, to contain not above 30 students, and that the number of instructors be correspondingly increased.

All of which is respectfully submitted.

C. SCHURZ,
J. ELLIOT CABOT,
CHARLES E. GRINNELL,
Committee on German.

4th October, 1894.

XLVII.

REPORT OF THE COMMITTEE ON MATHEMATICS.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY :

The Visiting Committee on Mathematics, appointed by the Board of Overseers of Harvard University, beg to report that they have carefully endeavored to ascertain the character and influence of the instruction given.

They have put themselves in communication with the Professors in the Department, and have taken what seems to them the best steps for informing themselves of the progress of the students. While the methods followed at present are evidently efficient, they are nevertheless not such as to lend themselves to easy investigation, since they consist chiefly in lectures and commentaries by the instructors, followed by semiannual written examinations of the pupils.

Your Committee has not evaded labor or trouble, and the Professors have manifested readiness and a cordial desire to afford the Committee every facility for fulfilling their duties. After much consideration, the most practical course which suggested itself to the Committee was to ask the teachers for a sufficient number of the books written and handed in at the examinations, to permit correct inferences as to the attainments and progress of the students. This has accordingly been done, and a majority of the members of your Committee have independently and carefully studied a large number of the examination-books, furnished by the Professors for the purpose, and comprising, as they have assured us, a fair selection from those of the best, the average, and the least satisfactory sort.

In this way your Committee believe that they have acquired a correct general idea of the results of the instruction given; and they beg to report that this appears to them to be of high character and most creditable to the students in the Department as a whole. In several cases the examination-books give evidence of eminent mathematical ability, warranting high expectation for the future and quite comparable with the best results of mathematical teaching in any institution with which the members of the Committee are acquainted.

The need of a department-library, which should contain the most important works in various branches of mathematics, for reference and consultation, has earnestly been urged by different professors. The germ of such a library already exists, but it is only a germ, and

the need of its increase is great. No better opportunity could be desired for any one desirous of promoting the success of mathematical teaching in the University by some pecuniary gift within the power of persons of moderate means, than is here afforded. Even a hundred dollars, annually expended in the purchase of standard mathematical works for the use of the department, would probably be of essential service in facilitating the work of the teachers.

For the Committee,

B. A. GOULD.

November, 1894.

XLVIII.

REPORT OF THE COMMITTEE TO VISIT THE MEDICAL AND DENTAL SCHOOLS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:

The Committee appointed to visit the Medical and Dental Schools submit the following report:—

Members of the Committee have visited both of the Schools; have attended the exercises; inspected the laboratories, lecture rooms and museums; have talked with the instructors and students,—and in general have endeavored to make themselves familiar with the work done in those departments of the University which they were appointed to visit.

THE MEDICAL SCHOOL.

The Medical School, we are glad to report, continues to enjoy an increasing and deserved prosperity. The compulsory four years' course went into operation in the autumn of 1892, and there has been no reason to regret its adoption. The step was taken without any guarantee fund—at one time proposed—and the result has shown that none was needed. The entering classes last year and this year are the largest in the history of the School. The School at present has 454 students. The only embarrassment apparently caused by lengthening the course of study is the inadequacy of the accommodations in the present building, generally known as the new building. This building has only been occupied eleven years and more space is now required. Steps must before long be taken to enlarge the laboratory facilities of the anatomical, histological, and bacteriological departments. Hitherto the classes from the Dental and Veterinary Schools have attended the exercises of some of these departments with the first class of the Medical School. This is no longer possible, and separate instruction must be given. A new building for laboratory purposes will be required and might be erected on the vacant land adjoining the present building. It has also been proposed to put another story on the present Sears laboratory building. For these purposes the School desires to raise a sum of \$100,000.

During the summer a new cold room was built at the School for the use of the Anatomical Department, at a cost of more than \$3000. It has now been in use for some months, and accomplishes most satisfactorily the purposes in view. Accommodation is also provided for the Pathological Department's material. The air of the interior of this room is both cold and dry and electric light furnishes an admirable illumination.

The number of teachers directly or indirectly connected with the School is very large and is increasing. Perhaps for this reason they have not the same acquaintance with each other as formerly. To bring together all those interested in the work of the School, the Faculty have arranged for an evening reception at the beginning of the School year in the School building. There are now eighty-eight teachers giving instruction in the School. The Faculty have recently voted to allow other men who wish to give instruction, but who are not connected with the School, to announce their courses in the School building. The courses in the Summer School are well attended, and are exciting increased attention, as is evidenced by the numerous letters of inquiry, many from distant points in the West.

More scholarships are greatly desired. At present there are three fellowships and thirteen scholarships. The competition for these by good and deserving men is very keen.

While convinced that the various departments of the School are on a healthy basis and conducted with a view to stimulating activity, your Committee permit themselves to say an especial word of commendation for the work done in the Anatomical Department.

There is still no separate department and no Professor of Therapeutics; the remarks made in the last report of your Committee on this subject are as applicable now as then. In the division of studies materia medica and therapeutics are assigned at the end of the list to the second year students; they do not appear at all among the studies assigned to the other three years. Some instruction in therapeutics is given by the instructor in materia medica and hygiene. His course consists of two exercises each week, the chief part, but by no means all of which has to do with drugs. His directions from the Medical Faculty were to teach the physiological action of remedial agents with such *incidental* reference to their practical application as should be deemed necessary, the main facts as to the latter being left to the teachers in the various clinical departments.

Your Committee have corresponded with all the clinical teachers in regard to the kind and amount of instruction in therapeutics given by them individually. The tradition exists that they each and all give

such instruction. Your Committee believe that more effort is made to give such instruction than was the case two years ago. As a matter of fact, however, your Committee and the students themselves must still feel that this instruction is entirely inadequate both in kind and in amount. It is the one really weak spot in the teaching at the Medical School of the University, and for young men who are to earn their living by healing the sick or trying to heal them safely, quickly, and agreeably, there is no branch of medical study more important.

Your Committee will not enter into the question as to whether this department should be presided over by a practising physician, or by a physiological chemist, but they do not hesitate to reiterate their opinion that such a department should be provided for in the School and that practically the whole of this essential subject should not be left to the good intentions of the clinical teachers.

A Chair of Therapeutics need in no way interfere with instruction in therapeutics by the clinical teachers to whatever extent their time may permit and their zeal may urge them.

THE DENTAL SCHOOL.

The principal change affecting the Dental School has been the remodelling, at the expense of the School, of the building occupied by it in North Grove St. This is the old Medical School building and is loaned to the Dental School by the Medical School. About \$5000 have been spent on the changes. As a result the Dental School now has accommodations which are light, clean, and convenient, whether for operative or laboratory work, and which should answer the purposes of the School more satisfactorily for some years to come. The situation is not in all ways ideal, but the proximity to the Massachusetts Hospital and to a poor population offers counterbalancing advantages.

The School now has a three years' course, with eighty students and twenty-eight teachers, without counting those teachers belonging to the Medical School who also give instruction to the students in the Dental School.

The last year was a favorable one for the School, which certainly deserves the support and encouragement of the community.

The Committee append a statement from Dr. T. H. Chandler, the devoted Dean of the School, received in response to a request for his views in regard to its present condition and future needs. Dr. Chandler's unselfish interest in the Dental School gives him a just claim to your attention:—

“The alterations in the old building cost a trifle over \$5000 ; other expenses have been necessitated by these changes, amounting to a few hundred dollars, which do not seem to come properly under the head of building expenses.

“Notwithstanding all this cost, which seems to me almost money thrown away, we are crowded in the mechanical department, and need more room as imperatively as ever.

“I wish the corporation would come to our aid as they did in Dr. Keep’s time, when he bought the old building on Allen Street. We paid up that debt with interest and could pay up another with proper facilities for increasing our numbers. There is no public spirit in Boston to help Dental Schools. Other cities build large and spacious buildings for such schools by private subscriptions, while here we have almost utterly failed so far, and there seems little prospect of ultimate success. There is a dense ignorance of what we are doing and of what we have done. I dare say this ignorance extends even to the gentlemen of your corporation, and that there are but a few among them who appreciate our work.

“This is our overwhelming and absorbing need.

“The old building is not properly situated, and can never, by any amount of money spent upon it, be made fit for our uses. All such money is practically wasted.

“Moreover the day is fast coming when we shall not be able to get a suitable situation even at a big price, therefore there is the more need of haste.

“I write all this from a full heart, and hope it will not be thought mal-a-propos.”

GEORGE B. SHATTUCK,
HENRY H. SPRAGUE,
CHARLES F. FOLSOM,
SAMUEL A. GREEN,
MORRILL WYMAN,
JOHN S. BILLINGS,
WILLIAM STURGIS BIGELOW,
GEORGE VON L. MEYER.

March, 1895.

XLIX.

REPORT OF THE COMMITTEE ON COMPOSITION AND RHETORIC.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:

In the last report of the Committee on Composition and Rhetoric, submitted now three years ago, attention was called to the singular and most unhappy divergence found to exist between theory and practice in one most important branch of education preparatory for College. So far as writing the mother tongue is concerned, — a thing all admit not to be wholly disregarded in what is known as the higher education, — the theory, elaborately expounded and generally accepted as an established article in orthodox educational faith, long has been that the proper way to learn to write English is to translate orally Greek and Latin. In this way, it is argued, and, if not alone in this way, yet indisputably better in this than in any other way, can command of a vocabulary, flexibility, and knowledge of construction, in short a terse elegance of pure English expression be acquired. And, accordingly, it is found on examination that the programmes of the better class of preparatory schools set forth that in these institutions, in all cases of translating Greek or Latin into English, a “free, original and idiomatic rendering” is insisted upon.

Discouraged at what seemed the lamentably low average of the English exercises submitted to them as the work of the younger college classes, the members of the Committee, in preparing their report of three years ago, turned to the examination books in which Greek and Latin were rendered into the native speech. They hoped to find in them extracts from the classic masterpieces reproduced in that “free, original and idiomatic rendering” upon which the programmes announced it was the pride as well as the practice of the preparatory schools to insist.

The result of their inquiries was not inspiring. Indeed it was so distinctly the reverse of inspiring that the Committee, in place of merely stating their conclusions, which would naturally have been challenged on the ground of exaggeration, took the unusual course of submitting as part of their report a large body of evidence in the form of original examination papers, as well as compositions, all

printed *literatim, punctuatim et verbatim*, and a large part of them reproduced in fac-simile.

Those papers spoke for themselves; discreditable to the young men, averaging nineteen years of age, who prepared them, they revealed a condition of affairs, combined with methods of instruction in the preparatory schools, the reverse of satisfactory. Nor was the state of affairs thus revealed denied. On the contrary, commenting upon that 1893 report, Prof. W. W. Goodwin,¹ speaking with indisputable authority, remarked: "Many good people who read the Committee's report will believe that our mother tongue is singled out for neglect and contempt by the preparatory schools; and some will think that the neglect of English is justified by the high standard of scholarship in Latin, Greek, and Mathematics which (as they suppose) the college exacts of its candidates for admission. Nothing can be farther from the truth than both of these ideas. . . . A similar test applied to any other department would disclose a state of things in the lower ranks of scholarship which would be proportionally disreputable. . . . It cannot be doubted that a similar depth of ignorance of Geometry, Algebra, Physics, or History might easily be disclosed."

The Committee on Composition and Rhetoric has, of course, nothing to do with the Departments of Geometry, Algebra, Physics, or History; but, assuming that the condition of affairs in those departments, so far as our preparatory education is concerned, is as described by Professor Goodwin, and further that neither the College nor the preparatory schools themselves, but the entity conveniently known as "the system" is responsible therefor, the question naturally presents itself whether anything, and, if anything, what can be done to remedy such a condition of affairs.

That the condition of affairs, so far as the written rendering of Greek and Latin into English is concerned, should admit from any quarter of aggressive, or even earnest defence, would seem in face of the evidence, most improbable. It has, indeed, been suggested, in a somewhat deprecatory spirit, that things may not be quite so bad as the examination papers would seem to indicate; inasmuch as, when the scholars who wrote those papers sat down to express themselves for ordinary purposes of life, it would be found that they naturally threw off the evil influences of their training, and, it might even perhaps be hoped, would express themselves nearly as well as they would have done had they not been subjected to that training. In

¹ Prof. W. W. Goodwin in *Harvard Graduates' Magazine*, January, 1893 (vol. I) p. 190.

other words the examination papers, so far as the rendering of the classic tongues into English was concerned, were mere educational antics incident to admission to college, and not to be taken seriously.

Accepting this plea in extenuation, and allowing it all the weight to which it is entitled, it yet remains that, under the existing system, the examination papers indicate unmistakably that a very large portion of the time of the preparatory school course is consumed in exercises which, in result, so far as good English composition is at issue, seems to obscure at least in the mind of the student the fundamental principles that every sentence consists of a subject and a predicate, and that clearness in the expression of thought is of the essence of good writing. Beyond this elementary conclusion it does not to your Committee seem necessary at present to go; but they again adduce in this, as in their former report, a body of original evidence showing that the conclusion has not been arrived at unadvisedly. The following are some of the examination papers in Advanced Latin taken at random from a mass of such papers by candidates for admission to the College, submitted at the last (1894) entrance examination.

No. 1.

And this Macedonia even when neighboring nations were conquering and barbarians hemming in, peaceful itself by its own efforts, and quiet, we watched over with a slender guard and small army even without a chief command, but by legates, by the very name of the Roman people; but she now is so harassed by the consular power and army, that she hardly can recuperate herself during a long peace. Nay who has not heard this, who does not know that the Guelph used annually to pay a great fortune to L. Piso, that the whole tribute and customs of the Dyrrachines were turned over to the supervision of this one man, that the city of the Byzantines most faithful to you and this empire has been harrassed after the fasion of an enemy, how he when he could screw nothing out of the poverty-stricken could tear away nothing by any violence from the wretched sent his cohorts into winter-quarters; he placed over them men whom he thought would be most diligent satelites of his crimes, ministers of his cupidity.

Therefore retain him longer in the province who makes compacts with enemies regarding allies, with allies regarding citizens, who even thinks himself to be more than his colleague on this account because the latter has deceived you by sadness and by his faith, but the latter never pretended to be less than he was able. Moreover Piso in some way boasts that he has accomplished in a short time that not Piso alone should be thought the most able of all.

[The above was marked C—.]

No. 2.

The lines rush together with equal leaders and with equal strength. the last lines press close together till neither arms nor forces allow the crown to be moved. Here Pallas stands and exhorts there and Lusus there opposed nor much has age diminished from his splendid form but any return to country fortune denies him. Nor does the ruler of great Olympus allow these feet to rush together among themselves. soon their fate threatens at the hands of a greater enemy.

In the meanwhile his noble sister advises Turnus to succumb to Lauso who cuts the middle rank with swift chariot. Thus speaks he when he sees the allies. 'Time is to disist from fight, alone I am brought against Pallas Pallas alone has a debt with me, I wish his father might be here to view the fight,' then the allies desist at the just command. But the youth wondered at Rutulus in his fall and now at the haughty order he stands stunned by Turnus and casts his eyes over that great body and he runs afar from all sight of slaughter, and with such words goes against the tyrannic order. 'Either with rich spoils already snatched I will be honored or with the habiliments of death. My father is content with either lot. Bring on your threats.' Having spoken he plunged into the water. His blood with the cold Arcadis enters his heart. Turnus leaped from this chariot the

[*The above was marked C.*]

No. 3.

And this Macedonia, neighboring nations now having been overcome and the barbarian (race) having been repulsed, peaceful and quiet through its own efforts, this Macedonia we were wont to see held with a garrison and very small band by lieutenants even with the imperium by the very name of the Roman people. Now it is so harassed by the Consular command and army, that it is scarcely able during a long continued peace to reestablish itself; while in the mean time, who of you has not heard this, who knows it not, that the Achaens yearly pay to Lucius Piso an enormous tax, that all the tribute and harbor duties of the Dyrrachians is turned into the treasury of this one man, that the city of the Bysantines to you and to this government most faithful, has been harassed into an unfriendly mood? Wherefore this (villian) after he was unable to squeeze anything more from the paupers; or by any force wrest anything from the unhappy creatures sent his cohorts into winter quarters; over them he placed those whom he thought would be most thorough participates in his crimes and ministers to his desires.

[*The above was marked C.*]

No. 4.

To you, indeed, conscript fathers, I have given thanks individually and will give thanks. In the beginning I gave thanks to all collectively (universis) as much as I was able; in no way can I appropriately return thanks.

And although I have in mind the especial favors of many, which favors can in no way be passed over in silence, yet it is not proper at this time and in my state of anxiety to recount the kindnesses of single individuals towards me; for it is difficult not to pass by any one who has done me harm. I ought to cherish you all, conscript fathers, in the number of the gods.

But just as we are wont not always to reverence and beseech among the immortal gods the same divinity, but some one others another so among the men who truly have placed me under a debt of gratitude, all my life will be spent in heralding and reviving the benefits of those men to me.

[*The above was marked A.*]

No. 5.

What more glorious legacy could I leave to my descendants than this, that the senate decided that that citizen who had not defended me, was unwilling for the republic to be safe? And so your authority, so powerful, and the great reputation of the consul were of such avail that if any one did not come he thought he was committing some wrong and disgraceful act. And that same consul when that incredible multitude, almost all Italy, had come to Rome, called you together to meet in a body at the Capital.

At that time you were able to realize how much strength natural worth and true nobility had; for Quintus Metellus, an enemy and brother of an enemy, perceiving your feeling in the matter layed aside all private hates.

But for you, conscript fathers, I have done and I shall do great kindnesses. I have done for you all from the first as much as I could. And although there are especial favors shown me by many which can on no account be unrecognized, yet at this time of fear I must not attempt to mention the favors of individuals towards me, for it is difficult not to pass over some one, wrong to pass over any one. I ought to cherish you all, conscript fathers, among the number of my gods. But as among the gods themselves we are not accustomed always to worship and pray to the same ones, but worship some at one time, some at another, so for me among the men deserving divine gratitude from me, there shall be my whole life in which to acknowledge and cherish their favors towards me.

[*The above was marked C +.*]

No. 6.

Behold however the bull smoking under the hard ploughshare fell and threw out from his mouth blood mixed with froth and stifled his last groans. The sodden yeoman departs unyoking the bullock sorrowing at his brother's death, and leaves his implements fixed in the midst of his work. Nor the shades of the lowering groves, nor the soft fields can move his mind nor the which flying over the rocks seeks the field by the streamlet* (but his sides are shaken with sobs) and stupor presses upon his fixed eyes, and his neck by the bending weight looks toward the earth.

To meet him, attended by the battle line of the Volsci, ran Camilla the queen and alighted from her horse under the very gates, the queen whom imitating the whole cohort jumped to the ground, leaving their horses. Then thus she speaks “O Turnus, if there is any confidence in a man brave and deserving of himself, I dare and promise, alone to rush against the followers of Aeneas and to go against the Tyrrenian horseman. Permit me to try the first dangers of the battle with my band. You, a foot-soldier stand at the walls and guard the fortifications.” To these things Turnus responded fixing his eyes upon the frenzied queen. “O maiden glory of Italy What thanks shall I prepare to speak or what thanks to return? But now that spirit of yours by far surpasses all things, that desire of yours to share my labor.

* but the depths of his sides are loosended.

[The above was marked B +.]

No. 7.

What more glorious thing am I able to leave to my posterity than this, that the senate has decreed that whatever citizen does not defend me does not wish the republic to be safe. And so your authority was of so great weight and the great dignity of the consul has availed much that he would think that he himself was committing mispropriety and crime if no one should. And likewise the consul, when that incredible number had come to Rome nearly Italy herself, summoned you in great crowds into the capitol. At which time you were able to understand how much might the goodness of nature and true nobility has; for Quintus Metellus, both and enemy himself and the brother of an enemy, at your wish, laid aside all his clearly seen private hatred.

To you indeed, Oh Conscript Fathers, individually I both have given and shall give thanks. Collectively, I gave you as much as I was able in the beginning. I am in no way able to give them sufficiently elaborately. And although there are the particular good deeds of many toward me, which can in no way be kept silent, yet my time and my fear do not allow me to try to relate the benefits of individuals toward me, for it is not diffi-

cult to pass by some-one it is not right to pass by any one. I ought to cultivate you collectively Oh Conscript Fathers, among the number of the gods. But as in the case of the immortals gods themselves, we are accustomed to venerate and to pray to not always the same ones, but sometimes to one sometimes to another, so among deserving men every age will be divine for me for proclaiming and cultivating their good deeds on my account.

[*The above was marked C—.*]

No. 8.

And this Macedonia, which was (itself) peaceful and at rest by itself, when at last the neighboring tribes were subdued and their fierceness checked & held with a guard, and, even without (a commander's authority, and we were defending with a small force, by means of the lieutenants merely in the name of the Roman people; which now under the consuls' rule and army is so harassed it can hardly recover (itself) under a long continued peace; since meanwhile who of has not heard this, who is ignorant, that the Greeks pay yearly a large sum of money to Lucius Piso, that the whole tribute and customs of the Dyrrachinians is to the demands of this one man. that the city of the Byzantians, most faithful to you and this empire has been wrought into a hostile state of feeling? So he after he was became unable to extract anything from these needy people, or extort by any force anything from these wretches, he sent his cohorts into winter quarters. He placed ever them those whom he thought would be most zealous abettors of crimes, ministers to their own avariciousness.

Keep therefore longer in the province him who obtains treuces (or agreements) by the allies with (our) enemies, and by the citizens with allies, who even thinks he is better than his colleague in this that he (the colleague) has deceived you with his sadness and countenance, while he himself had never pretended to be less than he was. Piso however in a certain other way one boasted that in a short time he had brought it about that Gabenius alone of them all should not be thought (to be) the most good-for-nothing (?)

[*The above was marked C.*]

No. 9.

The battle lines rush together, both equal in respect to leaders and strength. The ends of the lines thicken nor does the throng allow the weapons and arms to be moved. Here Pallas presses on and cheers on, here Lausus against him nor do their years differ much, illustrious in form, but to whom Fortune denied a return to their native land. The ruler of great Olympus did not suffer them nevertheless to rush together by themselves; soon their fates await them under a greater foe. In the meanwhile

the kind Sister advised Turnus to follow Lausus, who was cutting the midst of the battle line with his flying chariot. As he saw his companions, "It is time to cease from fighting, I alone am going against Pallas, Pallas belongs to me alone; I wish the father himself were present as a witness." This he said and the companions withdrew from the plain at his command. But at the giving way of the

[*The above was marked C —.*]

No. 10.

Also this Macedonia as the tribes are subdued and the barbarism suppressed are guarded in a state of peace and quiet through its own efforts, with a slight guard and a small band even without the power of the legates in the name of the Roman people, but now it is so harassed by the consular power and the army that it is scarcely able reestablish itself in a lengthy peace.

Who of us has not heard of this? who is ignorant that the Achaeans are paying a great sum of money to L. Piso yearly, that the tax and entire port dues of Dyrrachini are turned into the ——— of this one man, that the city of the Byzantines most faithful to you and this power is harassed in a hostile manner. On account of which he, after he was not able to squeeze out anything from the needy people sent the cohortes into camp. Over them he placed those whom he thought most diligent assistants in his crimes and ministers of his deeds of avarice.

Retain him therefore longer in the province who makes treaties for the allies with their enemies and for the citizens with their allies although he thinks that on this account he is of greater value than his colleague because he deceived you by the sadness of his countenance he pretends that he was

But Piso congratulated himself that he accomplished it in a short time that Gabienus alone should not be thought ——— of all.

[*The above was marked C —.*]

No. 11.

The lines meet, one as strong as the other, and with well-matched leaders. The ends of the lines grow thick with men and the jam prevents the rise of hands and weapons. Here Pallas starts forth and encourages these, on the opposite side Lausus does likewise; there is no great difference in their ages and their beauty is great, but Fortune may not let them return to their country. Yet the ruler of great Olympus does not allow them to meet and presently their fates leave them to the power of the stronger enemy.

Meanwhile Turnus's fostering sister warns him to yield to Lausus as Turnus cuts through the midst of the line in his swift chariot. When he saw his allies, he said, "It is time to cease from battle; I alone am borne against Pallas, to me alone Pallas belongs; (lit. is due) I would desire

that even his father be present as a witness." When he said this, his companions ceased fighting. With the following words he opposes the command of the tyrant. "For my part, I will be praised either for the best spoils taken or for a glorious death: the father is favorable to each lot. Strike." Having spoken he went into the middle of the field. The cold blood froze in the veins of the Arcadians. Turnus leaped from the chariot.

[*The above was marked C.*]

No. 12.

What more splendid thing have I been able to leave to my descendants than this fact: that the senate has considered that he who, as a citizen, had not defended me, was against the safety of the republic? And so, such has been the power of your authority and so effective has been the least display of the consul's majesty, that he who did not come, considered that he acted basely and infamously. So too, the consul, when that enormous multitude, and almost Italy herself, had come to Rome called together a large number of you at the Capitol; and upon that occasion you could see what power there is in integrity of character and in true nobility; for Quintus Metellus, both an enemy and an enemy's brother, laid aside all private dislikes when he understood your wish.

Indeed, conscript fathers, I have thanked you separately and I shall do so again. In the beginning I thanked you all as much as I could; but I can in no way do it gracefully enough. And although I have especial gifts which are deserving of much, yet this occasion and my own fear do not permit me to recount the benefits which I have received at the hands of individuals; for it is difficult not to pass over some one and wrong to leave out any one. Senators, I ought to cherish you all among the number of the gods. But, as in the case of the immortal gods, we are not used to always venerate and worship the same ones, — but are accustomed to pray to different ones, so too as regards men, I shall devote my whole life, received from those who deserve divinity from me, to setting forth and extolling their deeds which have deserved well at my hands.

[*The above was marked C +.*]

No. 13.

Then lo, the bull, foaming around his fierce mouth falls and belches forth gore mixed with froth and utters his last groans. The sad ploughman departs, leading away the bullock, which is mourning for the death of his brother, and leaves behind the plough, where he had just ceased working. Neither the shadows of the lofty groves nor the soft meadows can soothe his mind nor the rivulet which flowing over the rocks, clearer than amber, runs toward the plain; but his lowest limbs become stiff, faintness overpowers his lifeless eyes and his neck when its support was gone, glided to the ground.

Camilla accompanied by a large crows of Volscians, went to meet him; at the gates the queen dismounted and her companions imitating this action left their horses and leaped to the ground. Then the queen speaks: O Turnus, if you have confidence in one, who deserves it and is brave, I dare and promise to attack the columns of the followers of Aeneas and alone shall go to meet the Tyrrhenian Knights. Let me attempt the opening skirmish of the battle without army, but do you place your men around the walls and protect the city. Turnus with fixed eyes looked at the virgin, bristling in her armor, and replied to these words: O Virgin, glory of Italy, what thanks shall I utter, how can I prepare to repay your kindness? Yet now, since my mind is above all these things, let me share this combat with you.

[*The above was marked B.*]

No. 14.

Behold! a bull foaming under his hard jaws, fell and belched forth from his mouth blood mixed with foam, and uttered his dying groans. The sad ploughman went with his brother's death, the grieving bullock, and he leaves the plough stuck in the ground in the midst of his work. Not the shades of the lofty groves, nor the soft (prata) can alter his mind, nor any river purer than (electro) which flying amongst the rocks seeks the fields; but the deep sides are broken, and a stupor comes over his motionless eyes, the neck falls to earth with a ponderous weight.

To meet him Camilla the queen rushed forward accompanied by a crowd of Volsci, and leaped before the gates themselves from her horse. The whole cohort imitated her, left their horses and jumped to the ground; then she spoke as follows; "Turnus, whatever faith in himself there may be in a brave deserving man, I dare and I promise to meet the charge of the companions of Aeneas, and to go alone against the Tyrrhenian knights, and first to try the dangers of war without the band. Do you turn your footsteps toward the walls, and protect the battlements. At these words Turnus, fixing his eyes on the dread maiden said "Oh virgin pride of Italy, what thanks can I prepare to give you? But now your soul is above all else, to share my labor with me.

[*The above was marked A.*]

No. 15.

And this Macedonia, the neighboring races having been already subdued and barbarism restrained, we used to protect by a slight guard and a scanty band, even without chief military command (imperium) through lieutenants and by the name of the Roman people itself; this now is so harassed by consular command, and by an army, that it could hardly refresh itself by a long peace; since, meanwhile, which of you has not heard this, who does not know, that the Achaeans pay a great sum of

money yearly to L. Piso, that the whole tribute and port dues of the Dyrrachians is turned into his single private purse, that the city of the Byzantines, to you and to this empire very faithful, is harassed in a hostile manner? Thither he, after he could squeeze out nothing from the needy, wrench out nothing by any force from the wretched, sent his cohorts unto winter quarters; he appointed those, whom he thought the industrious tools of his vices, as the instruments of his avarice.

Keep him, therefore, longer in the province, he who made arrangements with the enemy about the allies, and with the allies about citizens, who even thought himself worth more than his colleague in this, that his colleague deceived you by the sadness of his countenance, he himself never pretended to be more worthless than he was. But Piso boasted in a certain other way that in a short time he had brought it about that Gabienus should not be thought the one the most worthless of all.

[*The above was marked B.*]

No. 16.

And we were guarding this Macedonia, the neighboring tribes having been overcome and the barbarians driven back, itself pacified by its own act, and quiet, with a slender guard and a scanty band, even without (direct) command, through deputies by the very name of the Roman people; this has now been so harassed by the consular command and the army, that it could scarcely recover in eternal peace; then who has not heard, who does not know, that the Achaeans pay an immense sum of money to L. Piso every year, that the tax and the whole of the imposts of Dyrrachium have accrued for his benefit alone, that the city of Byzantium, very faithful to you and to this empire, has been harassed in a hostile manner? from which (city) he, after he was able to extract nothing from its poor (citizens) to squeeze out nothing by force from its wretched (inhabitants) sent his cohorts into winter quarters; he placed those over these (people) whom he thought would be the most diligent connivers of his crimes, (and) servants of his desires.

Retain him therefore in this province, that he may make compacts concerning (our) allies with the enemy.

[*The above was marked C.*]

It will be observed that all of the above papers were pronounced satisfactory so far as the admission of the candidate to College was concerned. The showing would be much worse had a due proportion of the papers of those who failed to pass the examination been included. As it is, the papers differ in no essential respect from those given in the previous (1893) report of this Committee, or from those subsequently printed in the *Harvard Graduates' Magazine* for January, 1893. The same inferences must be drawn from them. As

stated by Professor Goodwin these inferences point to "a state of things in the lower ranks of scholarship" which is "disreputable," and a "depth of ignorance and carelessness," so far as elementary English is concerned, which is "one of the many results of the deplorable condition of our lower education, for which neither the College nor the preparatory schools are directly responsible, though the consequences and disgrace fell largely upon both." Professor Goodwin further adds: "There is no conceivable justification for using the revenues of Harvard College, or the time and strength of her instructors, in the vain attempt to enlighten the Egyptian darkness in which no small portion of our undergraduates are sitting. The College must do something to redeem herself from disgrace, and to put the disgrace where it belongs; but she must no longer spend time, strength and money on the hopeless task which she has recently undertaken."

These it will be noticed are the conclusions of a Professor, and a very eminent Professor, of the College. Expressed with a directness of language which your Committee would hardly have ventured to use, they set forth with clearness an inside view of the situation. The paper from which these extracts have been taken appeared over two years ago, immediately after the report of this Committee was published. If in consequence of that report, or of Professor Goodwin's paper upon it, any steps in the direction of a reform of the "system" have been taken, they have not reached the ears of your Committee, nor are the results thereof conspicuously apparent in the examination papers since submitted.

While such a very unsatisfactory condition of affairs is seen to exist in the primary education, it seems scarcely profitable for the Committee to pursue its investigations further and into the more advanced departments. When, again to quote from Professor Goodwin, "the underpinning on which we propose to build our higher education is weak and unsteady,"—when on the highest authority this is admitted to be the case, it appears to the members of your Committee that the best possible service they can render is to call repeated attention to the facts until adequate measures of reform are initiated and their results become apparent.

Those measures of reform are not for this Committee to indicate. The members of the Committee are not specialists in educational matters, nor do they profess to be familiar with results produced in other countries and through different methods. If also, as Professor Goodwin asserts, the difficulty in the present case is one for which neither the College nor the preparatory schools are responsible, but

is inherent in "the system," it is apparent that the work of reform will prove a considerable one. None the less it is also apparent that the College is now wasting its time, strength and resources in an impossible attempt "to enlighten Egyptian darkness," and this state of affairs at least should not be allowed to continue. That it may not continue it must be shown that it continues to exist; even though evidence of the fact, to be conclusive, may involve, as in the present case, a wearisome reiteration.

This report is general in character. The Committee has not given and, indeed, does not know the names of any of the students whose papers have been published, or those of the schools at which they were prepared. In their next report, however, the Committee may not improbably pursue another course. With a view to presenting the evil in a different light and keeping attention fixed upon it from varied points of view, it may then be thought best to publish the papers of all the candidates presenting themselves for admission to College from some one or two particular schools or academies, — the Boston Latin School, for instance, and Mr. Noble's; or Messrs. Browne & Nichols, and the Roxbury Latin, — thus at once bringing into contrast the methods pursued and results achieved in those schools, and showing the degree, if any, of improvement brought about in collegiate preparatory institutions of the higher class.

Having this possible action in view, and in order that their purpose may be generally understood, the Committee would recommend that a sufficient number of copies of this report be printed for the use not only of the governing boards of the College, but also for that of the instructors in the leading preparatory schools.

All of which is respectfully submitted.

CHARLES F. ADAMS,
EDWIN L. GODKIN,
GEO. R. NUTTER,

Committee.

April, 1895.

REPORT OF THE COMMITTEE ON THE MUSEUM OF COMPARATIVE ZOÖLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:

In its report presented January, 1893, the Committee to visit the Museum of Comparative Zoölogy stated certain definite and urgent needs of the Museum, which, it regrets to say, are essentially the same now as then. It has not been possible to provide any of the large sums needed for the development of the Museum or for the requirements of teaching.

The needs with which we have to deal, and which were given in detail in our last report, are first, on the part of the Museum, more space for collections for work and for teaching; more assistants for the care of the specimens; a systematic collection of fossils from our Western States and Territories; an aquarium and vivarium; a marine zoölogical laboratory; and secondly, on the part of the University, more teachers.

The scientific work done at the Museum, like its publications, has added to the fame of the University, but the drudgery of elementary teaching presses so hard as to prevent much original research that might otherwise be done and to hinder direction of the higher work of advanced students.

The two years since our last report, like the previous years of the Museum's existence, have been of great activity, in spite of the difficulties in the way, with a vast amount of original work, including costly and valuable publications, for which we are, as always, deeply in debt to the generosity of the Curator, upon which we have depended too much.

The long illness of Dr. Hagen, which lasted more than three years, ended in his death, November, 1893. He had devoted twenty-three years of his active life to the service of the Museum, had published many papers, and had built up an invaluable collection for his department. His presence and his extensive information will be sadly missed in the laboratory where he labored so long.

CHARLES F. FOLSOM, *Chairman*.
A. LAWRENCE LOWELL,
LOUIS CABOT,
F. L. HIGGINSON,
A. T. CABOT,

REPORT OF THE COMMITTEE TO VISIT THE DEPARTMENT OF FINE ARTS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE :

Your Committee on Fine Arts herewith make their report. It seems to us that for many reasons this Department to-day deserves your particular attention. Interest in the Fine Arts has greatly increased among us for the last few years. Where but few of our young men used to follow artistic pursuits, now they are adopted by large numbers. For instance, on last Thanksgiving Day fifty-six American students of architecture sat down to dinner together in Paris. This year about twenty-five Americans applied in Paris for entrance to the architectural course of the *École des Beaux Arts*; and nobody knows how many American painters there are now in that city. To the general advance that these examples indicate, a great university should not only contribute recruits prepared to hold their own with less favored men, but it should also lead in those matters which help to make the nation at large appreciate both good results and right intention, and which make them also critical of bad artistic work. Such a duty to-day and here is important. Does Harvard furnish her share of these recruits and is she doing her part in the placing of a high standard before the country?

Mr. Norton's lectures have been continued this year, as usual, but the numbers in attendance have been greatly increased and the lectures in consequence have been held in the Sanders Theatre. The course interests a large number of students. Many of them diligently take notes, and from the notes that we have read, it is plain that an important subject is treated in a most interesting way. The lecturer discusses not only the history but the philosophy of art, and his side remarks which are received with attention by all the class, cover subjects of current interest and criticism of contemporary work.

We regret that these most conspicuous lectures on art at Harvard are not animated with greater hope for the future of art in this country, but they are stimulating and important factors in the College work.

It seems to us that the class is far too large. Not only is it difficult for those seated at a distance to hear, but the course passes with

the students as a "soft snap," and if we could judge from the appearance of the lecture room, perhaps one-third of the young men elect it as such. That proportion, it seemed to us in the class room, were engaged in reading books or newspapers or were in repose. It may be argued that if a soft course is necessary somewhere perhaps it is well to select that on Fine Arts, because whatever influence it does exert on the idle will be civilizing and beneficial. From no other point of view, however, should there be anything soft about a course on Fine Arts over one treating say of history or political economy. Our observation is that the idle gain next to nothing from the more solid information imparted by the lecturer, but catch at his marked and individual views on current topics. These they seize upon and repeat without attaching to them the solid reasons which have seemed so important to the lecturer. This half information can do them no serious good, and, more than this, the possibility that a large part of the class may be idle and inattentive in the class room engenders the pernicious idea that the study of Fine Arts is hardly serious and that it is suited to idle dilettanti, a view with which we cannot sympathize. It would seem to us that the popularity of this study, as testified by the great size of the classes, would warrant the Government in increasing the teaching staff of this Department, with a view to dividing the students into more manageable sections. It is self-evident that the instructor himself cannot do justice to four or five hundred examination books.

It seems to your Committee that the students should have placed before them in connection with these lectures photographs or other available material, that the visual image shall thus be presented to the student rather than an intellectual description of the object under discussion. This, we are sure, would be the opinion of all artists.

Mr. Moore's courses continue to constantly growing classes. He gains in influence and power as years pass. His lectures review the history of art at close range. They are accompanied by exercises in drawing, which render the young man observant and give him a good knowledge of shades and shadows and form in what seems to us a very proper manner for a University course. We have sometimes wished that to this rigid course of observation could be added a course in rapid sketching or in delineation pure and simple. It is true that University education, perhaps, should not extend to such practical application of art. While the University teaches the theory of music, it does not teach the use of any musical instrument. While it teaches literature, it does not teach handwriting. So while it teaches art, it need not be expected to teach drawing. We may grant this

and say it should be taught in the schools. But it is not so taught and the scientific man, the doctor, the professor and the artist is sent away from College regretting his inability to draw, when it is nearly as necessary to him as writing. When our graduates enter the Institute of Technology as architectural students, they are from this lack unable, except by a special adjustment of their course, to keep up with men who have been there but a single year. We make no suggestion of a new University course in this respect, but it seems to us that among the courses in the architectural department one might readily be formed in sketching and the simple drawing of objects, which if open to undergraduates of the College would fill a need; or again an evening atelier, like those in Paris, for drawing under the guidance of an artist from the cast or later from the life, might be welcomed at Cambridge as it is in all large communities.

A visit to the Architectural Department gives to us an impression of life and activity. This course has now been in existence two years. It has an admirable corps of instructors and is prepared for the best work. The teachers were told early in the year to drop any students who by idleness or otherwise would embarrass the school. They, however, chose to admonish the backward, and the results seem to justify their course. About thirty pupils are now at work and the results of these first two years are most encouraging. It is to be noted, however, that among the regular students is not a single Harvard graduate, and yet they are the men who ought to fill the school. We want to have the eyes of undergraduates turned towards these courses and towards art as a profession while they are in College.

Mr. Chaplin, the late Dean of the Scientific School, was the first to urge the establishment of this course, arguing that the appointment of an architectural professor would be the only addition to existing University facilities needed. He urged that it should be treated less as a culture study than as ending in something by which a man might earn his bread. Then Mr. Shaler, on becoming Dean, urged its establishment, and at one time desired it to be a school to graduate building superintendents. The President of the University has always, however, wished to have architecture taught at Cambridge as a Fine Art, and in a way to suitably lead to a Bachelor of Arts degree, and that its treatment should be allied with that in the Classics, Comparative Literature, Philology, and Aesthetics. To the great satisfaction of your Committee this is the kind of school that the new teachers are developing. They write that they hope to make it characteristic of their department "that architecture shall be

treated as essentially a fine art"; that they "wish to avoid in every way the conception that architecture is a science with a little art superadded." They have laid out their course with an "aim to give the students such a knowledge of the history of architecture and of the growth and meaning of architectural forms, as may enable them ultimately to use precedent not blindly but intelligently and with some freedom." And varying from the traditional methods of the *École des Beaux Arts*, they intend "that the problems given out shall depend upon present American conditions and not be merely conventional school problems without any basis in the soil, as it were." They hope, too, that ultimately the majority of students in the course may be drawn from the ranks of college graduates, especially from Harvard.

It is gratifying to learn of the number of pupils that have already joined the school. Mere numbers, however, seem of slight importance compared with making a proper start. They may be a drag and a hindrance. We suggest that it is absurd to impose on the present corps of instructors the teaching of rudimentary drawing. We urge strenuously that ability to draw objects easily be an absolute requirement for entrance to the course. We also urge that in the next College Catalogue an invitation be inserted for those students in the College, who have thought of becoming architects, to seek advice as to their courses from the instructors in architecture. This would be in addition to similar invitations printed this year on page 216 of the Catalogue.

To some it seemed an error to ally a school of art with one of science. On the establishment of the architectural courses the *American Architect* said in an appreciative editorial:—

How far Harvard University is justified in establishing an architectural department can only be proved by lapse of time, and it is open to doubt whether this department has been established because there was felt to be a need or because the authorities, in pursuing their policy of rounding out their field of operations and justifying the rather modern name of their institution, felt that it would be a good thing to incorporate such a department with their other branches of instruction. If the new department was to be made at Harvard at all, we are disposed to regret that the department was made an adjunct of the Lawrence Scientific School and was not frankly added to the courses in the College proper, where in some ways it more legitimately belongs, or, rather, where there would be a better chance for its growth in the one needed direction, that of architecture as an art pure and simple. There are enough architectural departments now doing excellent work as attachments to scientific schools—we believe that

every one of the older schools is attached to the scientific side and not to the side of arts and letters, so that graduates can only receive the degree S.B., and not A.B., which seems more befitting a practitioner of the arts. The needs of the hour is the cultivation of the senses, not of the head and fingers only. Sooner or later there will be established somewhere and by somebody a thoroughly equipped and self-contained academy of fine arts, and, if it is conceived on proper lines and broad-mindedly conducted, it will inevitably be a success and as inevitably work an injury to the prosperity of those architectural departments which are adjuncts of scientific schools, by withdrawing from them those pupils who feel the inborn capacity to fit themselves for the higher reaches of the profession, but find the curriculum of the scientific schools somewhat cramping and restraining.

But the Scientific School and the College are more allied and interchangeable than may appear, and the Scientific School is arranged for a four years' course of prescribed study which the College is not. Besides, the School is growing rapidly and had funds to spare which the College had not. Hence the administrative advantages of a connection with the School. At the same time, we think that any future permanent professorship or permanent building should appertain to the University in general, and not to the Scientific School.

Your Committee has in a former report urged that addresses at Cambridge by practising artists would be of interest. An experimental course was given a year ago by prominent men, critics, professors, and artists. It seems to us that those by the artists were much the best suited to our purposes. The other lectures while admirable, were often from the same point of view as that occupied by the regular instructors at the University. But those by active painters and practicing architects like Mr. Blashfield and Mr. Hopkinson Smith, and Mr. Hastings, were admirably adapted to keep the scholar in touch with the world and to foster that artistic milieu without which good artistic work is difficult. The main trouble is with the audience. The University now furnishes but a small company seriously interested in subjects of this kind. As the architectural school and professional art instruction increase the audience will grow. While there can be no question that lectures of retrospective and critical character are of the first importance, we consider that the instruction that the College gives in artistic matters might well be supplemented, as occasion offers, by a continuance of these University lectures by artists not connected with the College. A similar influence would be exerted by occasional exhibitions, for instance, of the Gray collection of engravings, exhibitions for which the new museum will furnish opportunities.

The New Fogg Museum should benefit the Fine Arts Department. We feel in duty bound to inform you that there have been vigorous complaints by the teachers of the Department regarding the arrangement of the building, and often, as it seems to us, they have been well founded. We suggest that in the future no College building should be erected without giving greater regard than has been done in this case to the wants and needs of teachers in the Department concerned. As it stands, the building affords but moderate room for the exhibition of statues and casts, the lights are confusing, and some of the well lighted places are occupied by doors. If a fine work of art, a picture, or a statue were presented to the College, there are very few places where it could be creditably placed. The teachers of the Department have naturally looked forward to this building as one that would greatly extend the influence of their work, and since it fails in many ways to meet their needs, we feel that their complaints are natural and justified. The opening of the new museum and its collections will do something towards establishing a background for the Architectural School and the Fine Arts Department in general, but the museum does not supply all the facilities which would tend to create an artistic atmosphere at Cambridge. These can be met only by an atelier building in close neighborhood to the new museum, to accommodate the working rooms and libraries of the artistic departments. At present Mr. Moore's classes are in Sever Hall; those of Mr. Norton in Sanders Theatre. The Architectural Department is a quarter of a mile away on Jarvis Field, and none of these are at all near to the Library. Mr. Moore's valuable collection of photographs, etc. are now of no service to classes at the Architectural School, and the casts in Jarvis Field are of little serious use to Mr. Moore. A studio building adjoining the museum would economize books and collections, and would go a great way towards the creation of a school of art such as, with little doubt, is soon to grow up at Harvard. Let us hope that before long we may see the foundation for such a building.

ROBERT S. PEABODY,
JAMES A. GARLAND,
EDMUND M. WHEELWRIGHT,
FREDERIC P. VINTON,
SAMUEL D. WARREN,
EDWARD ROBINSON.

May 22, 1895.

REPORT OF THE COMMITTEE TO VISIT THE DEPARTMENT OF POLITICAL ECONOMY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE :

In the department of Political Economy the Professors feel the pressure of increased numbers of students, the lack of satisfactory space for lecture rooms, and the lack of time for independent work and research.

The difficulty is most serious in Economics 1. The lecture room available is ill-fitted for speaking or hearing, and the great number of students make it impossible, with the present corps of instructors, to divide them into sections small enough for adequate teaching and discussion. The difficulty has been met, as far as practicable, by strenuous and continuous work on the part of the Professors and instructors. This department, like others, feels the want of more books for reference, and of more library space for books and reading.

ARTHUR T. LYMAN, *Chairman.*

BOSTON, May 22, 1895.

LIII.

REPORT OF THE COMMITTEE ON THE DIVINITY SCHOOL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE :

The Committee to visit the Divinity School held a long and interesting conference with the Professors and feel that they can make a very satisfactory report on its condition.

Of late years there has been a changed and improved condition of the department, and a varied gathering of students with advanced standard, representing many denominations.

Fewer students during the past year have received pecuniary aid — one half only.

A spirit of coöperation and good feeling has prevailed with a new quality of piety and of personal loyalty. The practical preaching is more, perhaps, than in any other school.

The courses of some of the Professors are attended by many undergraduates of the College, and the need of a larger room is felt.

Some discussion was had about raising the tuition-fee, but the Dean feels that at present, at least, it would be unwise, in view of the fact that most theological schools charge a very low fee or none at all, and in consideration of the difficulties under which many of the advanced students come to the School. Some of the Professors think that a change may safely be made, but the Committee is not inclined to recommend a change at this time.

ARTHUR T. LYMAN, *Chairman.*

Boston, May 22, 1895.

REPORT OF THE COMMITTEE ON THE PHYSICAL LABORATORY AND THE DEPARTMENT OF PHYSICS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE :

We the undersigned, members of the Committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the Laboratory building on April 3, 1895, have the honor to report as follows :—

During the year Professor Trowbridge, assisted by Mr. Duane, has contrived methods and apparatus by which direct measurements have been made of the velocity of electric waves. The published results of these investigations will be a most important contribution to electrical science.

Dr. Hall has continued his investigations of the conduction of heat by metals ; and has recently perfected an apparatus which promises to yield definitive results in answer to several questions which heretofore have been ignored in physical research.

Professor Peirce has contrived methods and apparatus for an investigation of the conduction of heat by masses of marble, slate, etc., etc., with special provision for the study of the attending internal temperature curves of these substances. The results of his investigations will be of particular value in the discussion of problems relating to the cooling of the earth.

It is gratifying to note that the courses in physics generally adopted by high and preparatory schools throughout the country, accord substantially in both methods and apparatus with the “Harvard System” as contrived by Dr. Hall and Mr. Sabine of the Jefferson Physical Laboratory.

During the year Mr. Sabine has devoted much time to the contrivance of apparatus for work on light and heat in the “Physics 2” course. This apparatus is far superior to that which is usually found in the class laboratory, and much of it is adapted for use in original investigations of a high order.

In almost every room of the building are to be found instruments which by their ingenious design and fineness of construction bear witness to the very great value of the laboratory machine shop and the ability of its mechanician, Mr. Thomson.

The scrupulous neatness and order which prevail throughout the building bear witness to the efficient administration of the Director and his associates.

In former reports the need of a suitable working library within the building has been mentioned. This need still exists.

A consideration of the smallness of the laboratory staff in proportion to the amount of lecture room and class work performed, naturally excites surprise that so much is done in the way of original investigation. The explanation lies in the fact that the Director and his associates zealously devote their nights as well as days to the advancement of science. It is hoped that in the near future the income of the laboratory will permit the assignment of an assistant to each one of the staff. Certainly in no other way can there be ensured an equal increase in the usefulness and reputation of the Jefferson Physical Laboratory.

FRANCIS BLAKE,
A. LAWRENCE ROTCH,
E. D. LEAVITT,
W. H. FORBES.

9 April, 1895.

REPORT OF THE COMMITTEE ON THE ADMINISTRATION OF THE COLLEGE CHAPEL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE :

On behalf of the Committee on the Administration of the College Chapel, I have the honor to submit the following report prepared by a member of the Committee at the request of the chairman : —

The Committee on the Administration of the University Chapel feel that what was said in the full report of 1892 has been amply confirmed by the experience of the past three years. The system is excellent, the results, though not all that could be desired in the way of general attendance on the services, must be considered decidedly satisfactory, and the services of the University Preachers have been of the highest character and marked by a self-sacrificing spirit and by a breadth and devotion of the highest Christian quality.

The Committee has conferred with the present and some of the past members of the Board of Preachers and has asked for suggestions from them.

“Of one thing,” says one of the Preachers, “I cannot speak too decidedly or gratefully, namely, the reverent, attentive and devout attitude of the students who attend Chapel. Nothing could be more admirable nor more stimulating.”

More adequate provision for conferring with the students at Wadsworth House is desired. Frequently important conversations are interrupted by a caller who must be admitted or asked to wait in the hall or in the street. The Phillips Brooks Memorial House would relieve this and other pressing needs, and it is hoped that it may soon be possible to go on with the subscription which was interrupted by the financial disturbances of 1893, and that a building for the uses of the University Preachers and of the various religious societies may, before long, be erected, even if the sum of money originally contemplated cannot now be secured.

The Committee desires to call attention to the good effect produced by the attendance at Morning Prayers of members of the Faculty.

The new hymn and tune book for the Chapel Services is nearly ready and promises to be of much interest and value, but a portion of the cost thereof remains unpaid, and must be met by voluntary contributions.

For the Committee,

ROGER WOLCOTT, *Chairman.*

June 12, 1895.

LVI.

REPORT OF THE COMMITTEE TO VISIT THE
VETERINARY SCHOOL.

October, 1893.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Committee appointed to visit the Veterinary School for the year 1893, respectfully reports as follows: —

The Veterinary department of the University was organized in September, 1882, in the belief that a higher education was needed in this country by students in this branch of medicine, and for the the purpose of affording a free clinic for the animals of the poor.

This attempt, at that time, was made possible by the co-operation of the Faculty of the Medical School, by a gift of \$2,000 from the Trustees of the Society for promoting Agriculture, by one of \$500 from Mr. Henry L. Higginson, and by a guarantee for five years of the rent on a building to be erected for the purposes of the School. This support, excepting the sum of \$350 given at various times in small amounts, is all that the enterprise has ever received.

At the end of the first year of its existence it was found necessary to enlarge the School and Hospital accomodations, and money was lent for this purpose by the University, upon which an annual interest of six per cent. has regularly been paid.

In the short period of ten years the School has gained such influence that, now, connection with a university is considered by the profession to be almost indispensable for a veterinary school; and the higher education, first given by our School, has been made necessary for future would-be veterinarians by a unanimous vote of the national representative body of the profession, at its last regular meeting. The effort to establish higher requirements of education among American veterinarians has therefore met with success. Such success has not, however, attended the hope that a free clinic for the animals of the poor might be provided. Although at first a free dispensary was established and maintained for a time, and even now occasionally animals belonging to poor owners are treated free

of charge, there is no adequate free clinic, such as Boston should have. We have seen enough of the work to know that there is a large field for much needed deeds of kindness to suffering animals.

In undertaking to conduct a self-sustaining school of the higher grade in direct competition with those graduating students in shorter time, a large expenditure for instruction was necessarily incurred, while the income from students' fees was comparatively small. To meet expenses the Department has been obliged to use its small Hospital to its full extent for paying patients.

The progress of medicine from year to year shows more and more clearly the close relations which exist between the diseases of men and those of animals. A great part of the present knowledge of human medicine has been attained by comparative study of the diseases of animals.

A hospital clinic such as is contemplated, will form a valuable supplement to the work in the hospital for human beings. In this way the indirect and often unappreciated results will be no less important than those which are direct and obvious.

The Hospital has for some time been over-crowded with paying patients, and never has had accommodations suitable for the reception of cases of infectious diseases.

The present Hospital contains three small wards with a total capacity of thirty-two stalls and boxes, and a small dog-room. Operations have to be performed in a room lined on two sides with stalls.

The Hospital building should furnish at least four times as much room for patients, and should contain a good-sized and suitably-located operating-room, so that the surgeons may avail themselves of the great benefits of the modern antiseptic methods in surgery.

The accommodations for the School are equally inadequate. There is only one lecture-room, one laboratory, a museum-room, a reading-room, and a dissecting-room; all of them much too small for present needs. Two or three lecture-rooms, and as many laboratories are pressing needs.

The success of the School already achieved is remarkable considering its limited and inconvenient accommodations and the meagre aid which it has received. For this success the staff of instructors deserve great credit. By their ability, their perseverance, their enthusiasm and their courage they have overcome obstacles which must have been most disheartening. The School has demonstrated

its value and we submit that it has proved that it is worthy of a financial support suitable to its great possibilities, and adequate to attainment of the high standards for which the other departments of the University are justly distinguished.

Respectfully submitted,

GEORGE G. CROCKER, *Chairman*,
 AUGUSTUS HEMENWAY,
 THEODORE A. DODGE,
 A. S. BIGELOW,
 LAMONT G. BURNHAM,
 G. E. WILDER,
 LUCIUS M. SARGENT,
 J. ARTHUR BEEBE,
 GEO. G. KENNEDY,
 SAM'L A. HOPKINS.

Presented Dec. 4, 1895.

LVII.

REPORT OF THE COMMITTEE TO VISIT THE CHEMICAL LABORATORY.

Oct. 23, 1895.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The undersigned, a Committee appointed by the Overseers to visit the Chemical Laboratory of Harvard University, respectfully submit the following report:—

I. No just conception of the physical universe can be formed without some knowledge of the varieties of matter which are called elements, and of the forces and laws under which those elements combine, change their combinations with change of circumstances, and build themselves into the definite objects which surround us; therefore no scheme of a reasonably liberal education can be satisfactory that fails to impart instruction in Chemistry. A French saying to the effect that Chemistry is as eyes to the blind, does not too strongly express the perpetual satisfaction and advantage afforded by even a rudimental knowledge of Chemistry.

But, beyond such rudimental instruction in one of the principal departments of human intelligence, a wise community must further train many of its youth in either of two divergent ways. One of these branches of instruction imparts thorough knowledge of that lucid crystallized arrangement of all our conquests in this vast field which is sometimes called Theoretical Chemistry, and in the methods by which further conquests in it may be effected; the other branch, commonly called Technical Chemistry, shows how these conquests are utilized by applying chemical knowledge to the direct service of mankind, as in the manufacture of various substances needful to human comfort; this includes instruction as to existing methods and apparatus, and the means by which these and their products may be improved.

It is obvious that, though these two paths begin as one, and continue for a time nearly parallel, the training of a man whose aim in life is to instruct others, or of one who aspires to extend the present limits of human comprehension, should not, except in the earlier

stages, be identical with that of another who intends to seek his livelihood by supplying in part some one or more of the many commodities needful to his fellow-men, or by serving them as physician, as sanitary engineer, or in any kindred manner.

If the question were now an open one, it might be urged with much force and with propriety that Harvard University should confine its teaching of Chemistry to sound instruction in the principles of Theoretical Chemistry; that is, to the science only, leaving the field of art or Applied Chemistry to collateral institutions, such as the Massachusetts Institute of Technology. But we are obliged to remember that the University courses have long been adapted in part to the training of students in Technical Chemistry, and that Harvard stands before the public at this time pledged to continue such training.

We approve, therefore, of the courses of Harvard University as laid down in its "Announcement of the Department of Chemistry," which show a well-considered intention to impart training in both these separate paths, of Scientific or Theoretical Chemistry, and of Chemistry as applied to the Arts.

The practical question to what extent and in what manner Technical Chemistry should be taught there, is discussed later in this report.

II. Having expressed our conviction that no education can be regarded as liberal in which Chemistry is omitted, we now declare our equally-fixed conviction that special study of Chemistry can be best built upon the foundation of such general education and mental training as are afforded by the curriculum of a good university or college. Justus von Liebig said that his best students, those who became most distinguished, were always men who had had a university education; and precisely similar views have been expressed by Dr. August Wilhelm Hofmann, and by other eminent chemists and physicists.

The chemical student of this country requires at least a reading knowledge of German, French and Latin, and is pitifully deficient if unable to express himself with unmistakable precision and terseness, and even with a certain elegance, in his own language. We suggest as an exercise for chemical students in their second year the translation into English of such short treatise or text-book chapter in German or French, as the Professor of Chemistry shall indicate, and for post-graduate students, the preparation of a thesis in either German or French; study of Chemistry in original German and French text-books is desirable in post-graduate work.

Without implying negligence hitherto in this respect, we urge that clearness and correctness of expression in both speech and writing be constantly insisted upon.

III. The scope and range of chemical science have been remarkably extended of late years by the development of that new branch designated Physical Chemistry, treating of the relations between what have been regarded as simply physical agencies and those which have been considered as chemical only. These relations have been, and properly may be, treated from either a mechanical or a thermodynamical point of view, the latter being hitherto most approved; both require training not only in such preliminary branches of Physics as light, heat, and electricity, but also in the higher Mathematics.

Training in Physical Chemistry having thus become an essential part of the education of a well-equipped chemist, advanced study of Chemistry should surely be preceded by study of thermo-dynamics and of the calculus, as well as by that of General Chemistry and Physics.

We are gratified to observe that these views find practical expression in the Harvard Course No. 6, and that this course is intended particularly for graduates, who must therefore have previously mastered those branches which we consider to be fundamental for profitable study of Physical Chemistry.

By General Chemistry we understand Descriptive Chemistry as it should be taught, not by a course of lectures, or at least not by these alone, nor by such imperfect training in Qualitative Chemistry as some American colleges offer, but by a full and thorough course of Experimental and Preparative Chemistry, this last being too often neglected altogether or taught very superficially, although there are now many excellent German works on the subject especially in the department of Organic Chemistry.

An important advantage of the making of various chemical preparations and of experimenting is the opportunity thus given for acquiring the manual dexterity so indispensable in all good chemical work. Qualitative analysis should first follow this preparative course; quantitative analysis then naturally succeeds; lastly Theoretical Chemistry, which must have received some attention during all the earlier practice, demands most careful study after the student has mastered these preliminaries. Again we remark that the chemical courses of Harvard show in most part correct apprehension of what we conceive to be sound methods of teaching.

IV. The importance of Applied or Technical Chemistry has been well expressed thus by a recent writer; viz., "Chemistry enters so

largely into all the arts of modern life that few understand how much they are indebted to it, still less how much greater benefit they can derive from closer study of the relation between chemistry and their own branches of business."

Technical Chemistry — the actual every-day, bread-winning use of chemistry — cannot in the nature of things be exhaustively taught in any school, for no school can be expected to set up expensive plants of several sorts upon a manufacturing scale, nor can manufacturers be expected to open to students of any school the secrets of their crafts upon which their business prosperity depends.

Some expansion of the preparative or synthetic instruction above alluded to may, however, be profitably undertaken, and moderate apparatus simulating on a small scale such as is used in chemical manufacturing, may perhaps be advantageously set up to illustrate some few approved and practical manufacturing processes. The contriving of apparatus suitable for any given process is especially worthy of attention, for peculiarly in this field there is always room for the profitable exercise of ingenuity.

So far as it may be found practicable, we commend the visiting, by instructors or professors and classes, of those chemical establishments within easy access which will permit such visits; the professor or instructor to explain upon the ground the processes inspected, and each student to prepare afterward a written account of apparatus and process for the criticism of the teacher.

The analysis of materials used in any given manufacture, whether one of those visited or not, of divers substances at different stages of that manufacture, and of its finished products and its by-products, will be found advantageous in itself, and as affording opportunity for instructive remarks by the teacher.

An important feature of the study of Technical Chemistry, demanding careful even though brief attention from both teachers and students, is the estimation of profit and loss.

This estimation involves study of (1) Capital account, viz.: cost of land, buildings, and apparatus for a given process upon a given scale; also amount of money required to carry the necessary stock of materials and products and to pay wages, etc., until remuneration comes from sales. (2) Cost of product, made up of cost of material of all sorts, including fuel, freight charges, wages and salaries; repairs, insurance and depreciation; rent for fixed capital and interest for floating capital. (3) Cost-comparison of alternative methods for attaining the same or similar results, as in the old soda-ash process and the new ammonia-soda process; also cost-comparison

of the same process in different localities. (4) Comparison of production-cost with actual and probable market-price of product.

No doubt this is a range of subjects which cannot be exhaustively studied in any laboratory, and for which we cannot expect to find teachers very well equipped, yet, in every attempt to make technical chemistry available for bread-winning, such questions as these must be scrutinized and correctly answered before the industry in view can prudently be undertaken. The habit of considering this aspect of chemistry, even to the moderate extent practicable in a laboratory of instruction, will surely aid the student in solving the economic problems which are certain to confront him in actual life.

It is true that Applied Chemistry was not taught at Liebig's famous school at Giessen. The principles upon which the application of chemical science are based were taught there with assiduous care and thoroughness, so that its graduates when entered upon practical life were frequently able, after brief study of the actual details in a manufacturing establishment, to apply those scientific principles with advantage and success. Yet while freely according precedence to this thorough mastery of principles, we are nevertheless persuaded that in most cases the future career of the student who aims to qualify himself, in a school, for practical business application of chemical science, will be facilitated by some such training as we have just indicated.

V. The inadequacy of Boylston Hall for the accommodation of Harvard's chemical students is conspicuously shown by the present hasty fitting up of a basement-room, almost a cellar, to receive a considerable number of them. As a temporary expedient to gain room of some sort, promptly, at slight cost, this step may be defended; it cannot be regarded as a permanent satisfaction of the constant demand for larger space which arises from the constant increase in the number of students, an increase which is sure to continue and expand unless checked by the failure of the University to provide for it.

We learn from Professor Jackson that the chemical students in Courses *B*, *I* and *3*, numbered 493 on October 10, 1895, being 130 more than in 1894. The desk-room now available for them, including the new basement laboratory, will accommodate 551 students, so that 58 more could yet be taken.

But if the applications for next year should show the same increase as did those for 1895, and no further provision be made to receive them, 72 students would have to be rejected in 1896.

Should the advanced students and the research department be removed to a separate building, as below suggested, the space thus

gained would accommodate the students now placed in the basement, and 150 more. Adding these to the 58 surplus above-named, 208 students beyond the number now entered in Courses *B*, *I* and *3*, could thus be accommodated; enough, perhaps, to meet the growth of 1896 and 1897.

Even if Boylston Hall afforded sufficient space, it cannot be regarded as a suitable laboratory for Harvard University. It was not originally designed for this use, and after all the improvements that have been made, some of them excellent, it is hopelessly inferior to the modern laboratories of some other institutions.

Instead of attempting further modifications of that establishment, we are of opinion that the University should now look to the erection of an entirely new laboratory, and this in a new locality, because Boylston Hall is too solid and handsome an edifice to be lightly destroyed to make room for another. If the University could apply that edifice to another purpose, and could therefore pay for it to the Chemical Department out of a fund applicable to building for that other purpose, the sum so transferred would form an encouraging nucleus for the building-fund for the new laboratory. We ask the serious attention of the Overseers to this suggestion, since, without such foundation for a laboratory building fund, Harvard may be obliged to lag behind its sister institutions during an indefinite future, and to lose rank in one of its principal departments, unless indeed one of her Alumni or some other intelligent and generous citizen should bestow upon the University the great boon of a really suitable laboratory.

Should it be found impossible to procure in any way the needful funds for a proper building, we suggest that a new building of moderate size might be erected apart from Boylston Hall for the use of advanced students and for original research. Then, Boylston Hall, relieved of a considerable part of its present occupants, could be made temporarily adequate for the remaining classes without obliging students to occupy the above-mentioned basement.

But we strongly deprecate the adoption of this alternative, not only, or chiefly on account of its involving some difficulty in administration, but because of its radical insufficiency, and its confession of weakness that seems to us unworthy of the great University.

Another alternative is the building of additions to Boylston Hall, thus keeping all branches of chemical instruction, and all the future students, in the old spot, but the much ampler accommodations that are so urgently needed, cannot be properly provided by mere expan-

sion of what now exists, for the development of the science indicates the advantage of a quite different laboratory construction. Not only can better arrangements be made for the teaching of students, but original scientific research, which more than anything else makes a university illustrious throughout the world, which does so much to maintain alertness of mind in both teachers and students by cultivating what Tyndall calls scientific use of the imagination, and which always commands the respect of both scientific and practical men, can be much promoted by the offering of suitable accommodation for its prosecution. We repeat that one new building should be erected to provide room for all purposes, and we prefer to assume that in some way the funds requisite for that suitable building will be forthcoming.

In order that a clear idea may be reached of the amount of money required for this new modern laboratory that Harvard so obviously needs, a suitable design should be elaborated with as little delay as the case admits. Contractor's estimates could then be invited without fear of costly extra charges, and efforts to raise money would more hopefully be made when the needful sum could be confidently stated.

Time as well as money will be saved by very careful study of the interior arrangements after examination of the best laboratories to be found at other institutions, hasty action might defeat what is doubtless the intention of all who are interested in the subject, viz.:—that the new Harvard laboratory shall be at least equal in quality to any other in this country, and be large enough to accommodate Harvard's chemical students for many years to come.

The exterior may properly be of brick, with cheap stone trimmings, plain in form and quite devoid of costly ornamentation, yet possessing the dignity of well-designed mass and contour, which the new Public Library Building of Boston so happily exemplifies.

Perhaps no better method could be adopted in designing the new Harvard Chemical Laboratory than that which was so successfully employed to obtain a suitable building for physical research in the Jefferson Physical Laboratory at Cambridge. In that case each professor and one donor sent in a plan embodying his views of what a physical laboratory should be, which plans and views were criticized by a meeting of the committee. A second set of improved plans resulted, then, after further scrutiny, a third, and a fourth. The fifth plan, expressing the corrected and modified views of all, was adopted, and a practically perfect building was erected at a reasonable cost.

We are, however, not prepared to promise to bestow the time and study which that method implies for each of us. We consider it more expedient that the faculty of Harvard's Chemical Department should first prepare at least a sketch plan of what they consider the most suitable building for the purpose, and submit the same to this Committee, or to its successors.

JOSEPH WHARTON, *Chairman*,
WOLCOTT GIBBS,
ALEXANDER COCHRANE,
SAMUEL CABOT,
S. M. WELD,
N. THAYER,
EDWARD D. PEARCE.

Presented Dec. 4, 1895.

REPORT OF THE COMMITTEE TO VISIT THE JEFFERSON PHYSICAL LABORATORY AND DEPARTMENT OF PHYSICS.

TO THE BOARD OF OVERSEERS:—

The undersigned members of the committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the laboratory building on May 15, 1896, have the honor to report as follows:—

During the current year, the Director and his associates, in addition to their routine work connected with the instruction of four hundred undergraduate students, have made many important investigations with resulting creditable additions to the science of physics.

The subjoined list of titles of papers published bears witness to a zealous activity by the Laboratory Staff: Carbon and Oxygen in the Sun; by John Trowbridge. Triangulation by means of the Cathode Photography; by John Trowbridge. On the Velocity of Electric Waves; by John Trowbridge and William Duane. On a Certain Class of Equipotential Surfaces; by B. O. Peirce. Temperature Variations of the Thermal Conductivities of Marble and Slate; by B. O. Peirce and R. W. Willson. On the Thermal Conductivity of Mild Steel; by Edwin H. Hall.

It is satisfactory to note that the Director, in his investigations of the Röntgen Rays, has contrived processes and apparatus which have been adopted by the most successful workers in this new and fascinating field of physical research.

Mr. W. C. Sabine has contrived a most promising method and apparatus for the determination of the accoustic properties of enclosed space. The apparatus yields a beautiful photographic record of normal sound waves and of the reverberatory waves resulting therefrom under certain conditions.

The establishment of a suitable working library within the laboratory building is most desirable; and an additional mechanical assistant would render possible an increase in such original work as must be relied upon to promote the welfare and distinction of the Jefferson Physical Laboratory. In connection with this subject, it is fair to assume that any provisions which tend to increase the public interest in and appreciation of the Laboratory work must favor such a beneficent endowment as is prerequisite to its full development as a centre of physical research.

FRANCIS BLAKE,
A. LAWRENCE ROTCH.

May 18, 1896.

REPORT OF THE COMMITTEE TO VISIT THE CHEMICAL LABORATORY.

TO THE OVERSEERS OF HARVARD UNIVERSITY:—

DEAR SIRS,—Your committee to visit the Chemical Laboratory beg leave to make the following report:—

Four of your committee, including the chairman, made a visit to the Chemical Laboratory on Tuesday, May 19th, and spent several hours in a thorough investigation of the premises, guided by the professors in charge, and reports made by them.

The competency of the instructors cannot be called in question, but their surroundings, to teachers of ordinary ability, would be overwhelmingly embarrassing.

There is a great and pressing need for a new laboratory building, to be built at once. The present building, Boylston Hall, when built in 1858, contained a single laboratory with places for about forty students. At this day, after nearly forty years' use, it has crowded into it seven public laboratories and 568 desks occupied by students. The largest addition to its accommodations was made last summer, when a laboratory for 232 students was constructed in the cellar. At the time this room was planned it was thought that it would provide all the desk room necessary for the class in descriptive chemistry for five or more years, but when it was opened last October every desk was full, as the class had grown from 200 in 1894 to 302 in 1895; and not only was this room full, but the class in both its sections overflowed into the room for qualitative analysis. At the same time, the class in qualitative analysis had grown from 68 to over 100, so that 408 desks were needed for these two classes. The number of desks available was 428, leaving only 20 places empty. To these might be added 45 desks in the laboratory for elementary chemistry, which could, after considerable outlay only, be used for these classes, although even then they would be poorly adapted for this purpose. The number of places therefore available for the growth of these two classes from 1895 to 1896 (next autumn) is, at most, 65. The growth from 1894 to 1895 was 140. This brings before the Chemical Department the imminent

danger of rejecting students who have elected courses in chemistry, a most unfortunate necessity, as such rejections seriously interfere with the well-laid plans for the whole college course, and may even prove a grave hindrance to more than one man in his subsequent career.

This danger cannot be met with the construction of a new laboratory room, as the only space large enough for such a room (a part of the cellar) must be used for administrative purposes and the auxiliary rooms of the more advanced inorganic laboratories.

The condition of things in the laboratories for the more advanced electives is equally desperate. All are full, and the large size of the two elementary classes promises in the next two years to increase these electives in proportion. How to provide for this increase is a problem which it seems impossible to solve in the present building. Already the lower courses in quantitative analysis and organic chemistry have driven the men working on research in these lines into a corner, and any further infringement on the space devoted to research will seriously interfere with the highest work of the department; but this space is all that is available for the growth of these lower courses, and this, even if used to the utmost, is still insufficient.

The necessity of using every part of the building possible for students' laboratories has crowded the store rooms, preparation rooms, and other administrative offices into such cramped quarters that it has become a matter of great difficulty to carry on most important work with the necessary promptness and accuracy, and more room in this department is imperatively needed. The work is nearly doubled by the unfavorable conditions forced on the Director by the construction of the building.

It should be observed, also, that all the public rooms in Boylston Hall, with four exceptions, are at present used for purposes other than those for which they were built, and, although everything has been done to overcome the obstacles offered by these conditions, in many cases it has proved impossible to adapt the rooms to their new uses in a thoroughly satisfactory manner. This is conspicuously true of the arrangements for physical chemistry. The teaching of the class in descriptive chemistry is also badly hampered by the necessity of having it divided between two laboratories, one *in the cellar*, and the other *in the attic*; but all these latter disadvantages, great as they are, become insignificant when compared with the fact dwelt upon first, that in the near future, perhaps next year, it will be necessary to reject men who have elected courses in chemistry.

There is but one remedy for these evils, which will press even more severely on the University in the future than at present. This is a new chemical laboratory large enough for present needs and future growth, and provided with all the facilities for modern chemical work. This should be built at once, not only because of the pressing needs of the chemical department, but in order to avoid unprofitable outlay in patching the present building, which is inadequate, and from its general construction impossible to be changed so that modern processes can be profitably used.

STEPHEN M. WELD,
ALEXANDER COCHRANE,
E. R. SQUIBB,
EDWARD D. PEARCE.

BOSTON, May 27, 1896.

REPORT OF THE COMMITTEE TO VISIT THE BUSSEY INSTITUTION.

The Bussey Institution has been in operation for twenty-five years, during which period its teachers have striven to establish a practical school of agriculture in accordance with the terms of Mr. Bussey's will.

The courses of instruction have been excellent, but the students availing themselves of the facilities offered by the school have always been few in number, occasionally dwindling down to almost none. Reasons for this are not difficult to find, though which one of the several causes contributed most to the non-success of the school it would be hard to determine.

Though it is not worth while to dwell too long on past history, it may be well to suggest a few reasons why the Institution, perhaps, has thus far lacked popularity, before making definite recommendations for its future government.

Undoubtedly the great fire of 1872, which reduced almost to nothing that portion of the income of the Trust applicable to the running expenses of the Bussey Institution, had much to do with its troubles.

The number of students seeking an education in agriculture pure and simple is exceedingly limited, and the Bussey Institution, owing to its unfortunate situation, unable to extend to its students the facilities of the courses at Cambridge, can have no reasonable expectations of attracting those students who desire something more than a purely technical education in farming, from other agricultural colleges which combine other studies with their course in agriculture; and the rivalry of such schools as Amherst Agricultural College, a school subsidized by the Commonwealth and National Government, has undoubtedly been deleterious.

Local jealousies of professional schools connected with Harvard have also had their effect.

In general it seems as if an agricultural college, to be most successful, should be located in or near a farming community, and its course of instruction so arranged, in point of time, that they would be most vigorous during the warm months of the year when the

crops are growing. Mere lecture room or laboratory work could, of course, be carried on through the winter months as well, perhaps better, than in warmer weather, but not so with most of the practical work.

The demand for an education in farming pure and simple is very small in Massachusetts to-day, and in this immediate vicinity almost nothing.

The geographical location of the buildings of the Bussey Institution seems most unfortunate; not only is their situation too far removed from an agricultural community, but Forest Hills is not near enough to Cambridge or Boston to render properly effective either the Lawrence Scientific School, Botanic Garden, or the Veterinary School, which, collaterally, might be valuable adjuncts.

The main building at Forest Hills is well enough adapted to in-door work, though not, strictly speaking, a modern structure; ever since it was built, however, the institution has lacked both funds and students, and probably the obvious want of money may have deterred many students from going there instead of elsewhere, oblivious of the fact that probably the course of study is more valuable as given at the Bussey than at most agricultural colleges.

In view of these facts, and without at this time dwelling further on its history, it may be assumed, without fear of contradiction, that if, after twenty-five years of continuous expenditure, the number of students cannot be easily raised above even the highest number yet recorded in the school (22), either there is no proper demand for such a school on the lines now arranged, or else the teachers are unable to properly hold the students' attention.

Under either condition, it seems wise to the Committee to try and reorganize on some new basis, either by combining with other schools, or other department of the University, or by starting independently on entirely new lines, or both.

The general feeling in the Committee is that, in order to do the most good, the scope of such reorganization should be quite drastic, and that, while violent and rapid changes may not be desirable, yet to achieve the best results, the goal to be eventually reached must be very different from that hitherto in view.

Briefly stated, the financial situation does not seem to be so desperate as would at first appear.

As before stated, for twenty years past the school has been financially starved, the teachers have had a hard fight to hold any students at all, while the college has, from time to time, made advances of money to the Bussey Trust, till now the total debt

amounts to over \$54,800, the interest on which sum encroaches materially on the slim income derived from that portion of the Trust applicable to the running expenses of the Institution. The payment of this large amount can, however, doubtless be arranged, when desired, by the sale of land belonging to the Woodland Hills estate, and located near Brookline Avenue, on Thurlow and Uxbridge Streets (not yet built). This land, assessed by the city in 1895 for \$31,200, could, it is thought, be sold for enough to extinguish the debt now due the college.

Your Committee would recommend the subordinating of the purely agricultural feature of the Institution to other work of an allied nature, and such changes in time of instruction as would bring the bulk of the holidays in the winter season; and extend the term in such parts of the autumn and summer as would enable the students to take advantage and profit most by outdoor instruction. They would also recommend the abandonment of the scheme of having the Institution a school principally for the teaching of farming.

They would recommend the starting of a school of landscape gardening (or landscape architecture), having in addition to the existing laboratory and lecture room facilities, proper drafting rooms and appliances for teaching landscape engineering and kindred and collateral subjects; in fact, the establishment of a school where young men can obtain such knowledge as will fit them to take charge of the planning, developing, and maintenance of parks, country estates, cemeteries, etc., etc., would, it is thought, be a welcome addition to the existing professional schools. The fact that there is now no such school in America would, moreover, have a tendency to attract a large number of students interested in such work; the additional annual expense involved would not be excessive, and the establishing of such a school in no way conflicts with the terms of Mr. Bussey's will.

Such proposed arrangement would call for greater harmony between the various professional schools than at present appears to exist; in addition to the teachers now employed at the Bussey, there should be lecturers, two or three in number, drawn from active professional life, who, at regular intervals, could give instructions in special branches.

The economic study of Forestry has never been attempted in this country, though it is easy to see that in comparatively few years the effective forest areas on the continent will have been so much reduced on area, etc., that tree culture, for economic purposes, will become if not necessary, at least very desirable.

Massachusetts possesses not only large areas of wild land and every variety of soil, on which is growing all sorts of trees, but also sandy and rocky areas, etc., etc., on which nothing is seen but a scrub growth of no value. It would, therefore, seem eminently suitable for scientific tree culture, to be started here first.

The Committee also believes that the school would be aided in its work and increased in popularity by acquiring two or three rooms in some part of the city proper during the winter months, which could be used for lecture rooms and for demonstrations for those people who are not able to avail themselves at all seasons of the year of the facilities offered at Forest Hills.

It may not be generally understood that the larger portion of such proposed new courses are, even now, taught. The Committee's suggestion is, in fact, new combinations of existing facilities, supplemented by the work of a limited number of skilled specialists, rather than entire new courses of instruction.

The blending of studies already well organized ought to render possible the proper administration of the new work by the regular department executives, for the present at least, without outside assistance.

To be most effective, it seems as if the following should be either consolidated, or, at least, be operated in the closest harmony :

BUSSEY INSTITUTION.

ARNOLD ARBORETUM.

BOTANIC GARDEN.

VETERINARY SCHOOL.

LAWRENCE SCIENTIFIC SCHOOL.

It is suggested by the Committee that the proposed rearrangement of courses be started at once by a series of lectures on Landscape Engineering.

ERNEST W. BOWDITCH,
W. H. FORBES,
AUGUSTUS P. LORING,
FRANCIS H. APPLETON,
JAMES S. RUSSELL.

October 14, 1896.

Presented October 20, 1896, to the Board of Overseers.

November 11, 1896, referred to the Committee on Reports and Resolutions and returned without recommendation.

LXI.

REPORT OF COMMITTEE TO VISIT THE DEPARTMENT OF PHILOSOPHY.

TO THE BOARD OF OVERSEERS OF HARVARD UNIVERSITY: —

The Visiting Committee of the Department of Philosophy has the honor to report, as the result of time and thought given to the subject by us, its members, during the past year.

1st, Our conviction that the Department is doing work of great value, instinct with new life, work wisely planned and well carried out.

2nd, That there is, however, still another field of work which might also, in our opinion, be made of great value to the undergraduate student, but which has never had the independent place nor the importance given it which it seems to us it ought to have. For the undergraduate, one of the chief functions of a Department of Philosophy, we think, ought to be to give him training in habits of philosophic thought with regard not only to special subjects but to all matters of either speculative or practical interest with which his life may have to do. To this end we feel that if, when opportunity arises and the right man to create a branch of work which would be new as an independent one is found, courses were established which should have no direct relation to the instruction given in metaphysics, psychology, or any special science whatever, but which, through the instrumentality of lectures, theses, and discussions, should seek to develop among the students habits of speculative enquiry, of just and well considered reasoning, and of clear expression, courses whose sole professed function it should be to arouse men to original and independent thought and to quicken their imagination to grasp the synthetic significance and deeper relationship of facts, that the importance of the work they might accomplish could hardly be over-estimated. Undoubtedly this is work that is already being done within the Department in relation to metaphysics and certain other special subjects, but our observation has been that taking the University as a whole it is work that is greatly needed, and we believe that a broadening influence of this kind in its midst would be helpful not to the students alone but to the whole life of the University. We recognize fully the practical difficulties in the way of such teaching,

but we think they might be overcome if it were well borne in mind that it is not instruction in a science but the awakening and guidance of men's independent mental activities that is needed. Let men choose their own subjects within certain bounds, according to the outside work they may chance to be doing in history, economics, literature, or following any special scientific or social interests they may feel, or the practical political questions of the day; let them write upon these, giving their own thoughts and making their own criticisms as fully as they can be made to do. Let men hear their own work and that of their companions read, appreciated, criticized, and discussed not by their teacher alone but by one another. Let there be regular classroom debates upon questions of more or less general interest. And finally, let there be lectures that shall make the students realize the value, the immediate practical importance, even, of the work they are doing, and we feel convinced that its influence upon many, at least, among them could not be otherwise than far-reaching and profound. Of course, this work would extend upon the one side into the essay work that is already being done in the English Department and upon the other into such thesis work as the various special Departments may give their men to do, but, although we now merely suggest this as a possible field, for future development only when the time prove ripe for it, yet the longer we have considered the matter the more convinced we have felt alike of the reality of the need and of the practicability of the work it seems to demand.

3rd, That the thesis work of the Department seems to us of special value, and that the more the thesis can be used in the place of examination papers as the test of acquirement for all the higher work of the Department the fairer we think that test will be and the better the work itself will become. We are also decidedly of the opinion that all ten-minute examinations had best, in general, be done away with, additional hour examinations, if necessary, being substituted in their place. They are not fair tests of attainment and they cannot but interfere with the work of the lecture room.

4th, That in our opinion better work and of a higher order will be done by the students if not more than three grades at most be used in marking those papers which rise above the "Condition" line. We think that any finer-drawn distinction than this cannot but tend to withdraw their minds from a wider and more intelligent interest in their subject to concentrate it upon the often insignificant details that help to make up a more perfect paper. Four grades are now nominally used for this purpose, but a custom, common in the University, of adding the plus and minus signs to these, signs which actually do

count toward standing in the general practice although they do not in theory, multiplies what in our judgment is already too great.

5th, That another point which seems worthy of consideration in connection with the examinations is that much of the work both of reading and of marking the students' papers is done not by the teachers themselves, although it is they, as formerly, who prepare the examination papers, but by Dr. Rand, upon whose shoulders a very serious responsibility is thus thrown, one that could only be entrusted with safety to a man like him of long experience in the work and of special fitness for it. Where such a one can be obtained, however, the relief thus afforded its teachers from a part at least of the labor that the examinations involve in the larger courses cannot but be of great value to the higher work of the Department both in teaching and in production.

6th, That, while in the highest and most advanced courses of the Department the number of students who attend them is necessarily small and their work is of a character to demand the personal assistance and supervision of their professor and to bring them into constant contact and immediate personal relation with him, and while in the introductory courses of the Department, on the other hand, the courses are very largely followed and the work is scarcely of a character to demand more than text-book and lecture can give, yet in the intermediate courses, where the men, though fewer than in the introductory ones, are yet considerable in number and where their minds are already aroused to and interested in the discussion of new and difficult subjects, it seems to us of real importance that the work of the lecturer should be supplemented by that of younger assistants, men perhaps who have but just obtained their Ph. D. degree and as to whom it would be a benefit not only to themselves but to the University if she could retain them about her for another year or two. It would be a great gain to the students in these courses, we are convinced, if there were men to whom they could freely turn not only for help in what they do not understand but for the discussion of the ideas that occur to them and of the points of view that they may make their own. We strongly advise therefore that this be done to as great an extent as possible in all the higher and intermediate courses where the attendance is large, as we think that it would greatly increase the benefit the students might get from them.

7th, That, in regard to the courses the Department now gives in Education and Teaching, it seems to us of the highest importance that this subject should be made a study of from every point of view, and it is evident that this can only be thoroughly and syste-

matically done by teaching teachers to observe facts, to compare methods and their results, to seek after principles, and to keep in touch with the growing science built up out of the experience and thought of all. It strikes us especially as most essential that men and women who are studying to be teachers should be taught to realize the intimate relation of their profession to psychologic study and should themselves have a well-grounded knowledge of its principles, and we also believe that a study of the methods, or an observation of the absence of method, by which individual subjects are at the moment taught at Harvard and elsewhere will result in good, not only to those studying but to those whose ways of teaching are studied, tending with these latter to increase their consciousness of what they are doing and of why they are doing it, provided always that it be clearly impressed on the student's mind that the infinite variety of individual character and circumstance makes no method at all better than an unadaptive and rigid one. On these grounds, therefore, we consider that all encouragement possible to work of a wider range in this field should be given.

GEORGE B. DORR, *Chairman*.

WM. STURGIS BIGELOW.

I agree with the 1st, 3rd, 5th, 6th and 7th suggestion, and as to the others I have not yet formed an opinion.

RICHARD H. DANA.

November 24, 1896.

LXII.

REPORT OF COMMITTEE TO VISIT THE
VETERINARY SCHOOL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Committee to visit the Veterinary School for the year 1895-96 submits the following report: —

On November 4, 1895, members of the Visiting Committee sent to the President the following communication: —

“BOSTON, November 4, 1895.

“HON. CHARLES W. ELIOT,

“President of Harvard College.

“DEAR SIR, — The following communication is sent to you to be submitted to the proper governing body or bodies of the University.

“In 1893 the Visiting Committee to the Harvard Veterinary School, after careful consideration, became convinced that a free clinic for the animals of the poor was essential to the prosperity of the School. During the two years which have intervened, various other plans for strengthening and improving the School have been considered by the Committee. Such consideration has made even more clear the importance of the free clinic. A week or two ago it was learned that a brick stable building on Northampton Street, near Tremont Street, measuring 60 feet by 100 feet could be secured at a rental of \$1,200 per annum. Upon examination the location was found to be desirable, the rental reasonable, and the accommodations well adapted to and sufficient for a satisfactory test of the free clinic plan. Believing that the opportunity offered was an unusual one, and finding that the building was likely soon to be leased to other parties, the undersigned members of the Visiting Committee decided to assume themselves the responsibility of renting it for a term of three years. They now offer the building for said term to the College for the use of the Veterinary Department for a free clinic and for other cognate uses.

“Since the undersigned agreed to take a lease of the premises, four gentlemen have subscribed \$100 each per annum for three years for medicines and other outfit. The owner of the premises,

learning the purposes for which a lease was sought, agreed to a rental \$200 per annum less than that which there is reason to believe he could otherwise have obtained.

“The educational advantages of a free clinic will not be disputed. It may even be doubted whether Harvard University ought to hold itself out as an instructor in veterinary science, unless it can furnish that essential instruction which comes only from a general clinic.

“The abstract of the accounts of the School enclosed herewith, shows how promptly and satisfactorily the School responded to the more liberal educational advantages furnished five years ago. Since that time the fees have more than doubled; — in fact, have nearly trebled. In this connection also it is to be noted that of the \$2,600 deficit for the past year, about one half is for interest at the rate of six per cent. upon prior advancements. The acceptance by the Corporation of the offer now made may not increase the net outlay per annum of this Department. If, however, such net outlay should be increased, it is to be borne in mind that each dollar of College funds which goes into this Department will produce more of educational value than heretofore.

“Another aspect of the value of the free clinic has had great weight in determining our action. We believe that the free clinic is the best method to spread abroad that knowledge of the Department, and arouse that interest in and appreciation of its work which will render it possible to secure for it an adequate endowment.

“It has long been recognized that there is among veterinarians an antagonism to the School which has been a barrier in the way of securing endowment funds. Whatever may have been the cause of this antagonism, it is believed that there is no better and surer way to dispel it than by giving to the profession an opportunity subject to suitable regulations, to operate in the free clinic building of the School.

“If the free clinic is established and if the Board of Overseers will then appoint a Committee of its own members to join with the Visiting Committee in securing endowment funds, we shall enter on the work with fresh courage, renewed zeal, and confident hope of success. The public interest in the questions connected with tuberculosis and anti-toxine makes the present time peculiarly a time when effort is likely to be rewarded with satisfactory results.

“The suggestion has been made that an appeal should be made to the Legislature to furnish funds for the support of the School. We do not approve of that course, — we do not think that an appropriation could be secured, and we are unwilling to make the attempt.

“No one of the undersigned was in any way responsible for the organization of the Veterinary School. No one of the undersigned was in any way responsible for its location on Village Street. No special obligation to support the School rests upon us, other than that which results from undertaking the duties of members of the Visiting Committee.”

Under date of November 29 a response was received from the President, notifying the Committee that the Corporation had voted to accept the offer of the Visiting Committee. This letter contained the following encouraging statement: “This vote means that the Corporation has decided to persevere in carrying on the Veterinary Department. They have it in mind to make an immediate effort to strengthen the staff of the School and then to procure an endowment.”

Pursuant to the foregoing correspondence, individual members of the Visiting Committee took a lease of the building on Northampton Street for the term of three years from October 1, 1895, and became responsible for the rent of the same for the benefit of the School.

The building was forthwith appropriately repaired and fitted, and on February 12, 1896, its use for free clinics began. Up to the first of November, 1896, the number of patients treated was nineteen hundred and forty. This is the record for nine months.

There is satisfactory evidence that the students appreciate the value of the experience and instruction which the free clinic affords.

The Committee, in accordance with the suggestion contained in the letter of November 4, 1895, urges the Board of Overseers to take measures to secure an endowment for the School.

GEORGE G. CROCKER,
A. S. BIGELOW,
L. G. BURNHAM,
SAMUEL A. HOPKINS,
GEORGE G. KENNEDY,
J. ARTHUR BEEBE,
AUGUSTUS HEMENWAY.

Boston, November 11, 1896.

LXIII.

REPORT OF THE COMMITTEE ON PHYSICAL TRAINING, ATHLETIC SPORTS, AND SANITARY CONDITION OF BUILDINGS.

MAJORITY REPORT.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

In the restriction and improvement of athletic sports, Harvard has taken of late years a leading place. To your Committee it seems important that Harvard should take a similar place in establishing the principle that a complete system of education should recognize and require physical as well as mental development. We find to our regret that a very large proportion of students, not being sufficiently strong and active to play in the athletic teams, find no inducement to improve their physical condition. Thus a very large class take no regular exercise, and it is by no means uncommon to find men, often students of great promise, who leave College as much weakened in body as they are strengthened in mind.

To encourage all students to devote a reasonable amount of time and energy to the development of their bodies and general health, seems to your Committee to be of the very greatest importance, and we would commend to the careful consideration of this Board suggestions for a prescribed course of physical exercise during the Freshman year, which will be found in the report of Dr. Sargent appended to this report. Such work is of obvious advantage, and as it has been satisfactorily tried in several colleges, we believe that it is practicable, and that it would be highly beneficial at Harvard.

We find that the present system of physical oversight and examinations is, on the whole, satisfactory, and the general management of the gymnasium is good. Expert advice can be

obtained by every man who wishes it, and precautions are taken to prevent men who are weak or in poor condition from injuring themselves in match games or by over exertion.

In a general way, too, the condition of athletic sports is satisfactory. Your Committee are sure that at no time has there been a more general participation or a better general tone in college sports at Harvard than to-day. The spirit of professionalism, so far as it ever existed, has been almost completely wiped out, and a properly high amateur standard is maintained. It is customary to provide men on teams, during the active training period, with necessary athletic clothes and with better food without extra cost, but we do not think that any men are paid, either directly or indirectly, for their services on teams.

Yet while general conditions are satisfactory, your Committee find that certain dangerous conditions and tendencies exist in various degrees in all sports, and while we believe that these sports should all be retained, partly because they are essential to a general interest in athletics, yet we believe that some games, notably foot-ball, should be played between the colleges only under careful restrictions.

Chief among these dangerous conditions is the abnormal interest taken in all college contests, not only by the students but by the public, and the prominence given these contests by the press,—a prominence out of all proportion to their importance. For weeks before every important game, the names and faces of all the players appear in every newspaper, with detailed accounts of their skill; and after a period of training, during which the boys are led to believe that their doings are of real importance to the civilized world, they come to the game far more often overwrought mentally by the nervous strain, than over-worked physically. The game is then played before an immense audience excited to the point of blind partisanship. No boy can fail to feel the difference between a game so played, and one played for the pure love of sport. The hardest head is likely to be affected by the need of winning the applause and support of the audience, and the temptation to distort the true purpose of sport into a mere struggle for victory is too great. It is no wonder that in games of physical contact bad blood is aroused and dishonorable acts sometimes occur; nor is it strange, with such contests keenly in mind, with newspapers seeking to find and publish every detail, that there should be difficulty in arranging the conditions

of the games, and that an undesirable form of diplomacy should be developed.

Love of sport is a good thing in itself, and we cannot blame the American people for desiring to see athletic contests, nor papers for publishing what people wish to read, but the best development, not to say the decent continuation of college sports, demands that the spectators, especially at foot-ball games, be limited so far as possible to college men, and that the games be played only on college grounds.

The agreement with Yale already requires that games in future be played on college grounds, and it is to be hoped that something can now be done toward limiting the distribution of tickets to graduates only; while such limitation is not without objections, anything which tends to reduce these games to their proper position and proportion is valuable.

The second element of danger lies in the question of gate receipts. While there may not be any grave objection to the collection of a sum sufficient to defray the necessary expenses of the games, yet to play for any financial gain beyond this should be repugnant to college men, and the existence of large funds, collected by high admission fees, creates a tendency to extravagance, and offers the possibility of holding out some financial consideration to induce men to come to college for athletic purposes. While to-day no man is paid or could well be paid either directly or indirectly for playing on a team, yet there is constant danger that money may be used too freely in making college life agreeable and easy to the athlete. We do not deem it practicable to abolish gate money altogether, but we believe that much can be done in the way of limiting and determining the uses to which it shall be put. Your Committee hope that the question will be taken up with our chief rivals, and that an agreement may be reached as to how far the expenses incident to playing on a team may properly be paid and an arrangement made to limit the expense of each team. It would be our further suggestion that any surplus so saved, or otherwise created, be devoted to permanent improvements in the college athletic grounds or buildings. Since publicity is the best protection against improper use of money, we think it may be desirable to publish in some form the accounts of the graduate treasurer for distribution among graduates.

With these suggestions on general conditions, the question arises how best to control and regulate sports where regulation is neces-

sary, and we naturally are led to consider the constitution and practical workings of the body at present charged with that work.

The Athletic Committee, in its earlier years and original form, was constituted primarily to regulate questions arising between the Faculty and the students. The need of some body better constituted than the Faculty for the regulation of these questions was felt, and the Athletic Committee took them up with a great measure of success. It has commanded the confidence of the College authorities, has very properly restricted the number and place of games, and regulated wisely the questions in which the teaching department felt that athletics had interfered with the usefulness of the College. Moreover, the Committee should be given the greatest credit for the improvement which it has effected in the general moral tone of athletics throughout the country. The abuses of brutality and professionalism, which it was called on to consider, have been met with great skill, and Harvard has, beyond doubt, through the work of this Committee, very materially improved the standard of the men and the quality of sports throughout the college world.

In 1889 the Athletic Committee was organized in its present form, and, for the original purposes as above outlined, this organization proved effective; but more recently the scope of the work of the Committee has very largely changed and increased. The net-work of difficult questions which has arisen between the various colleges, involving all the sports, as well as a very highly strained state of feeling, has brought out the necessity for some centralized body which would represent all the sports as well as hold the confidence of the authorities, and which would have sufficient power to bind men engaged in these sports not only for one year, but for a series of years. The Athletic Committee, being the only body which fulfilled these requirements in any degree, has been drawn into conducting these negotiations.

Such a work is obviously beyond the original purposes of the Committee, and in our opinion ought, under ordinary conditions, to be abandoned in future; yet it has been shown by practical experience that it is at times necessary that the Committee should conduct certain negotiations and thus avoid the unfortunate petty quarrels which otherwise must arise. This action is not only necessary from the standpoint of the students, but is also necessary in the interests of the government of the University in order that the restrictions and reforms which are deemed necessary may be practically secured by agreement with the other colleges rather

than by stopping the sports. In our opinion necessary and desirable developments in this direction have shown certain deficiencies to exist in the organization of the Committee, and lead us to make the following suggestions:—

First. That the undergraduate captains of the chief athletic teams should be *ex-officio* members of the Committee. At present the three undergraduate members of the Committee are chosen by the presidents of the three upper classes and the captains of the principal athletic organizations, who are called together for this purpose by the President of the University.

Captains of teams were excluded because the Committee was supposed to pass on their actions and confirm their appointments. Practically these objections have not proved considerable, and the result of excluding captains has been that the undergraduate members have usually attempted to represent the various organizations without accurate knowledge. The need of having captains on a committee, whose chief function at present is to “pass upon” questions which arise between the colleges in arranging for the games which the teams are to play, is obvious, and was strikingly shown recently when by a mistaken impression of the wishes of one captain a proposition was made for an athletic event which that captain and his men would have been utterly unwilling to carry out. So long as the Athletic Committee sat in judgment over the acts of Harvard teams only, it was wise to exclude captains, but since from necessity the Committee has assumed to be the central and only real power for all serious negotiations with other colleges, it should allow those captains to assume their legitimate share in those negotiations.

Second. That the three graduate members at present appointed by the Corporation should be elected by the Overseers. The Athletic Committee was founded on the assumption that athletics were apart from ordinary affairs of the College, and a matter which the Faculty could not well control. Recognizing the importance of some representation of conservative graduate opinion, the Committee was made up equally of graduates, students, and faculty members. The Committee has failed to carry out the idea thus established, and has largely failed to secure the support of the body of graduates interested in athletics, because the appointment of both graduate and faculty members lies with the Corporation, and it is generally felt that one influence has thus controlled the Committee. We do not wish to be understood to

hold that belief, or to suggest anything which would tend to change the wise restrictions which that influence has been largely instrumental in creating. At the same time this feeling is so general, that, in our opinion, the Committee would command far greater support and carry out its original intent more effectively, if the graduate representatives were appointed by the body which most completely represents the graduates as a whole.

Third. We would suggest that the Committee either be given power to act till their successors are chosen, or that its members be chosen earlier so that there may be a full committee during the early Fall, when the most serious questions of the year come up in connection with foot-ball. Further, to secure a conservative policy, it would be wise to appoint the graduate members for a term of years.

As there are four important branches of sport, it has been suggested to your Committee that there would be certain advantages in having the four captains on the Committee, and in choosing four graduates and four members of the Faculty instead of three, thus increasing the size of the Committee from nine to twelve members.

In conclusion we would urge that to this Committee all questions properly within its jurisdiction be referred absolutely, and that neither the Faculty nor the Corporation should make any regulation or rule, unless under the strongest possible necessity, which would interfere with the Committee, or take from the body, which can best hear and consider such questions, the decision of those questions.

Looking back over the experience of past years and considering the results which have been accomplished, we believe that the tone of athletic sports has been improved, and that the relations of the University with other universities of the country are in a better condition than ever before. We believe that the relation between the students and the officers of government and instruction, so far as athletic questions are concerned, is excellent, and that whatever questions have arisen, or are likely to arise, have been and will be satisfactorily settled by the Athletic Committee.

So far as the question of success in athletic sports is concerned, the situation is more doubtful. It is impossible, and in fact beyond the purposes of your Committee, to analyze causes of failure which are in all probability complicated and diverse. It

cannot be doubted that the stand which Harvard has taken in raising the tone of sports has been detrimental to her success, and while we believe that it was wise to take such a stand, yet we believe that in future the undergraduates, under careful general restrictions, ought to be given, so far as possible, a free hand in the management of their sports and in the choice of their advisers. We cannot agree with the view that failure can be ascribed alone to lack of intelligent management and abuses of over-training. That there is a tendency in that direction we believe, but the abuse has not gone farther at Harvard than at other universities, and can hardly have injured us more than others. At all events it is certain that no policy of management can be successfully or wisely forced on those who are actively engaged in the various sports. They must work out their own salvation with the aid of such advisers as they may choose and believe in.

April 14, 1897.

MINORITY REPORT.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE : —

I am unable to join in the recommendations for change in the manner of appointing the Athletic Committee.

That Committee is a part of the administrative machinery of the University having charge of a very difficult and important subject, and should, I think, — except as to its undergraduate members, — be appointed, as other College officers are, by the Corporation and confirmed by the Overseers. Inter-collegiate contests need, in my opinion, more rather than less restriction than they now have, even since the reforms of recent years were introduced, and I think the Board of Overseers more likely, by reason of the manner of election of its members, to yield to the outside pressure of graduates for more games, especially at a distance from Cambridge, than the Corporation is. If the Corporation was ever in danger of nominating graduates who were too strict in this regard, it is not likely to do so now when one of the Fellows has himself served on the Athletic Committee and another is generally recognized as the warmest friend and patron of rational athletics in any of the Governing Boards, or in the whole graduate body; and I cannot doubt that if unsuitable nominations were made the Overseers would reject them until proper ones were sent in.

The appointment or election of administrative officers is not an appropriate function for a large elective legislative body, and would, in the end, impair the character and usefulness both of the Athletic Committee and of the Board of Overseers, besides depriving the University and the public of the salutary check of a confirming as well as an appointing body. I do not think it would command the confidence of the undergraduate body any more than the present method does, for I think few if any students distinguish between the different boards or know much about them; and if it would, I

think that such increased confidence would be purchased at too dear a price. Under the conditions of our American life, society, and present public opinion, the temptation to an excessive number and intensity of intercollegiate contests is practically irresistible to undergraduates, individually, as a body, and in their athletic organizations, as well as to many, if not most, parents and guardians; and rigid control of the subject by the chief executive of University government is absolutely essential to the cause of education. I should say the graduate members of the Committee had been hitherto sufficiently representative of the better sentiment among the graduates, and believe they will continue so, and that they should be more, rather than less, restrictive in their tendency and inclinations than they now are.

With regard to the undergraduate members, there would be some advantages in having the three principal captains *ex-officio* members if they could be assumed to know and care about track, tennis, and other athletic matters, and to be able to sit judicially in matters concerning their own and each others' teams in which they are petitioners; but as the Committee has the confirmation and rejection of their appointment as captains, and the power and duty of removing them for cause, it is difficult to see how they could with propriety sit upon the Committee. I am told, also, that they have generally declined to serve for lack of time, and that they are invited to be present when the interests of their teams are concerned. Moreover, if any real progress is to be made towards undergraduate self-government and management of intercollegiate athletics, it must be through the students learning to select from their own number representative, judicial-minded men outside of the teams, and then learning, as a body, to acquiesce in and sustain their action. I am told they have done well and have improved in this respect hitherto.

I concur fully in the other recommendations of the Committee, — especially the proposed introduction of moderate required gymnastics during the winter months] of the Freshman year, having recently seen the system in operation at Brown University, where it is required all through college, and having heard there none but the most favorable accounts of its working and popularity. A rational and systematic physical training for the great body of students who do not and cannot get onto athletic teams seems to me the most essential step to take next, and it seems to me as vital and fundamental a preparation for the work in life of an educated man

as English,—and more so than than French or German,—the present required Freshman studies. I would give a small credit for it—equivalent to a quarter or half course—towards the degree, but in addition to the present 18.4 courses, not as a substitute for something else within that total.

HENRY W. PUTNAM.

Boston, April 9, 1897.

APPENDIX.

TO THE COMMITTEE ON PHYSICAL TRAINING, ATHLETIC SPORTS, AND SANITARY CONDITION OF ALL BUILDINGS:—

I presume that no one at the present day questions the value of a sound mind in a sound body. This desirable possession is largely dependent upon a good respiration, good circulation and good digestion, and these fundamental bodily functions are greatly aided by the practice of some form of physical exercise.

I shall waste no words, therefore, in setting forth the physiological value of muscular effort to the brain worker, or in dwelling upon the peculiar tendencies of our times that make regular physical exercise in a system of education more and more desirable; but I respectfully invite your attention to the consideration of a few feasible plans for improving the work of the Department of Physical Training at Harvard University.

As a preliminary step to this consideration, let me review briefly the working of the department at Harvard since its inception in 1880, and also the physical work in a few colleges and universities with which Harvard is closely related.

The Hemenway Gymnasium was first opened January 2, 1880. From this time until June of the same year, 625 students were examined and given prescriptions of exercise. The approximate number using the gymnasium in later years may be inferred from table No. 1. As many lockers are held in common by two persons, and as many students use the gymnasium who dress in their rooms, the exact number that are accustomed to exercise in the gymnasium cannot be ascertained. From a record kept at the gymnasium during the winter months of 1895-96, it was found that the average attendance was about 700 per day. It will be observed upon referring to the table that, although the probable number using the gymnasium has increased from year to year, the percentage of

increase compared with the number of students in College has gradually decreased since 1886. The building of the Weld Boat House, Cary Athletic Building, and the Locker Building at Soldiers' Field, as well as the new dormitories now furnished with good bathing facilities, may in a measure partly account for the apparent decrease in the percentage of the number of students using the gymnasium. (See table No. 2.)

There are at the present time 2929 students connected with the University who live in Cambridge and thus have access to the gymnasium. Out of this number, 1810 have had physical examinations, and 1541 or more are holding lockers at the gymnasium. As 440 of those now holding lockers have not been examined, this makes a total of 2250, or about 73 per cent. of the students in the Cambridge departments of the University, who have probably attended the gymnasium more or less during the past three years. The distribution of the attendance among the different classes and departments of the University may be inferred from the following list of the lessees of lockers for this College year, up to January 1. (See table No 3.)

In comparing the percentage of those who hold lockers at the gymnasium, and those who take books from the University Library, it will be observed that the use of the library increases with the age of the student, while attendance at the gymnasium correspondingly decreases, with the exception, perhaps, of the Law School, where the principal reading is done in the department library, and the same may be said of the Scientific School students. It will be remembered, however, that the use of the library is stimulated largely by the extra amount of reading required to meet the demands of the various courses. (See table No. 3.)

The method employed at the Hemenway Gymnasium is as follows : —

Upon entering the University, each student is entitled to an examination by the Director, in which his physical proportions are measured, his strength tested, his heart and lungs examined, and information solicited concerning his general health and inherited tendencies. From the data thus procured, a special order of appropriate exercises is made out for each student, with specifications of the movements and apparatus which he may best use. These exercises are marked in outline on cards without charge, or in hand-books accompanied by charts at small expense. After working on

this prescription for three or six months, the student is entitled to another examination, by which the results of his work are ascertained, and the Director enabled to make a further prescription. Students holding scholarships are expected to be examined twice a year; and those desiring to enter athletic contests are required to be examined by the Director and obtain his permission so to do.

In addition to the individual prescriptions, there are classes in Free Movements and Light Gymnastics, designed to afford an opportunity for general development to all students of the University who are not members of the athletic teams, or who are not in need of specially prescribed exercises.

All students of Harvard University desiring to enter as competitors in athletic contests are required to give evidence of their ability by making the following strength tests, in addition to the regular physical examinations: —

Candidates for the University Crew and Foot-Ball Team and Weight Throwers are expected to make a total strength test of 700 points.

Candidates for the Class Crews and Foot-Ball Teams, and Gymnastic, Wrestling and Sparring Contests, are expected to make a total strength test of 600 points.

Candidates for the University and Class Ball Nines, Lacrosse Teams, Track and Field Events, are expected to make a total strength test of 500 points.

These points are reckoned as follows: The number of kilos. lifted with the back and legs straight, and the number of kilos. lifted with the legs bent, added to the strength of the grip of the right and left hand, expiratory power as tested by the manometer, and one tenth of the weight in kilos. multiplied by the number of times that the person can raise his weight by dipping between parallel bars and pulling his weight up to his chin on the rings. Where the strength test falls below the desired standard, the volumetric capacity of the lungs is taken into account in summing up the condition. These tests are made and certificates granted on any day, excepting Saturday and Sunday, between 2 and 4 p. m., within two weeks previous to a contest; but no examinations are made or certificates granted on the day of the contest.

In order to stimulate a general interest in developing and strengthening exercises, all of the students examined are now divided into groups. Those who make over a thousand points are put in the

star [*] group; those who make between 800 and 1000 are placed in group A; 700 and 800, group B; 600 and 700, C; 500 and 600, D; 400 and 500, E; 300 and 400, F; 200 and 300, G.

The 603 students who were examined this College year, up to January 1st, were distributed as follows: —

*	3	D	176
A	26	E	125
B	60	F	70
C	138	G	5

The numbers of students who have availed themselves of the opportunity for physical examinations and prescriptions are given in the following table (No. 4).

The falling off in the number of examinations last year was due to the fact that the gymnasium was only opened part of the year, on account of the building of the new addition and the making of extensive repairs. The examinations for this year are given up to January 1. The total number by July 1 will probably exceed the number taken in any previous year.

The number of certificates given last year to students training for athletic contests was as follows (see table No. 5). The above table includes in its numbers many who have entered two or three different athletic contests during the year, and therefore exceeds the number of individuals who were granted certificates. As many more, however, are dropped from the teams before they are in condition to apply for a certificate, the table gives a fair estimate of the number of students in the University who take some regular athletic training.

The individual system combined with the class drills and the training for the athletic teams, has worked well enough up to the present time to fill all the lockers in the gymnasium and take up all of the available space for exercise during the latter part of the afternoon.

Since the gymnasium has been worked to its full capacity under the present system, the Director has never felt called upon to suggest changes or improvements. The new addition with its increasing facilities and capacity for service has opened up new possibilities, and opportunities for improvements now suggest themselves.

In reviewing the experiences of the past sixteen years in the light of the data before me, the department has every reason to be congratulated, as the physical condition of the mass of students has been greatly improved, both at the time of entering and upon leaving the University. There are yet higher ideals to be realized.

If I may be allowed to offer a few private criticisms upon our present methods, I should say that the defects are as follows:—

1. The tendency to crowd the gymnasium between the hours of four and six P.M., on account of the arrangement of the hours for lectures and recitations.
 - a. This makes it impossible to give expert instruction in gymnastics or athletics,
 - b. or to get access to the pieces of apparatus prescribed for individual development.
 - c. It vitiates the air, which should be as pure as it is possible to have it in-doors.
2. The difficulty of arranging for class drills without interfering with the individual work, and of allowing the general use of the gymnasium without interfering with the class instruction.
3. The glorification of athletics and athletes.
 - a. If a man fails to get on to the "crew" or the "nine" or the "eleven," he sees no further motive for training and is likely to lose interest in all forms of exercise.
 - b. As the number of athletic teams remains about the same from year to year, while the number of students is increasing annually, an increasing number of students are left without any incentive for systematic training.
 - c. The tendency of the present method of instruction and coaching is to mould the best men that can be found into athletes, instead of using athletics largely as one of the best means of moulding men.
4. The want of proper respect for physical training as a means of developing the whole man.

- a.* One class in College is trying to cultivate the highest degree of scholarship, and another class is fostering extreme athleticism.
 - b.* Individuals in both classes will be likely to fail in life for the want of qualities which the other class possessed, yet there is no recognized method in College of equalizing these two extremes.
 - c.* Under the present system, the class that need physical training the most get the least, while those who need it the least often get more of it than they ought to have.
- 5. Our present system is defective, inasmuch as it affords no means of getting at a considerable body of students, neither scholars nor athletes, who need the bracing influence of physical discipline.
 - a.* These men need the same stimulus to physical activity that they do to mental activity.
 - b.* To invite them to exercise for the sake of their health, or as a means of physical and mental improvement, puts "too much of a strain on their higher motives," and they wait for the stimulus of necessity, which many of them would be thankful for.
- 6. Under our present system a man may attend a course of lectures on physiology and hygiene and get credit for it, but if he puts the knowledge thus gained into practice, and makes regular, systematic and conscientious efforts to improve himself, he gets no credit for it whatever, in terms by which his frequently less worthy efforts and attainments are judged.

At the present time the interdependence of body and mind is recognized by the leading authorities in medical and physical science, and efforts are making throughout our schools and colleges to put mental and physical training on a rational basis in view of improving them both.

During the past ten years the Harvard Summer School of Physical Training has done much in directing the current of thought along

these lines, having sent out over 700 instructors who are now teaching what we have taught them in nearly every State in the country. How widely the Harvard system of apparatus and Summer School method of instruction has been adopted may be inferred from the following list (No. 6).

From this list I have selected some of the leading colleges, in order to show their method of bringing the gymnasium work before their students. Those marked with the letter H have teachers who have attended our Summer School of Physical Training at Harvard, or come under the instruction of the Director elsewhere. (See table No. 7.)

The method pursued at some of these institutions, and the results realized according to the statements in their catalogues, are worthy of careful attention. I take pleasure in quoting from a few of them as follows : —

CORNELL UNIVERSITY.

ONE MEDICAL DIRECTOR. ONE INSTRUCTOR IN GYMNASTICS.

An introductory or general course of lectures is given each year to all Freshmen in the University.

Gymnasium work and military drill are required fall and spring terms of Freshmen and Sophomores. Physical examinations required.

UNIVERSITY OF WISCONSIN.

ONE MEDICAL DIRECTOR. ONE ATHLETIC INSTRUCTOR.
ONE FEMALE INSTRUCTOR.

Military drill and gymnasium work are required of the young men of the Freshmen and Sophomore Classes, and of female students of the first two years' attendance.

BROWN UNIVERSITY.

ONE INSTRUCTOR. ONE ASSISTANT INSTRUCTOR.

From November until April each pupil is required to exercise four hours a week in the gymnasium. (Graded for each class.)

For class drill, the Freshmen swing Indian clubs; the Sophomores employ dumb-bells; the Juniors engage in single stick exer-

cise; the Seniors use fencing foils, advancing, retreating, thrusting, and parrying at the word of command. As a supplement to these drills each class is separated into four divisions, which perform exercises upon the chest weights, horizontal and parallel bars, and other apparatus. The movements executed are graded to correspond with the strength and advancement of the several divisions. During the Sophomore and Junior years boxing and wrestling are carried on in classes. These forms of exercise, carefully conducted, prove to be in the highest degree popular and beneficial. The remainder of the required four hours per week each student devotes to the fulfilment of the directions given him on the card made out from the measurements taken at the beginning of the year. Each student is regularly marked and credited in his gymnasium work, faithfulness and punctuality being the test.

HAVERFORD COLLEGE.

ONE DIRECTOR. ONE ASSISTANT. PHYSICAL EXAMINATIONS.

Required work begins December 1 and ends April 15, and occupies four periods each week. It is arranged in two courses, each occupying one season. Students entering the Freshman class are required to take the two courses, one each year; and divisions for advanced work are formed of those giving evidence of previous systematic gymnasium drill. While the work is required of the two lower classes only, it is elective for the upper classes, and it is expected that the majority of the members will take advantage of the advanced courses arranged.

SWARTHMORE COLLEGE.

ONE MEDICAL DIRECTOR (*men*). ONE ASSISTANT. ONE MEDICAL
DIRECTOR (*women*). PHYSICAL EXAMINATIONS.

The young men are required to give three hours each week for carrying out the prescription of the Director.

The sports are under the supervision of the Director.

DICKINSON COLLEGE.

ONE ADJUNCT PROFESSOR.

In 1889 the Trustees organized the department of Physiology, Hygiene and Physical Culture on an equal footing with the other departments of the College, making Physical Culture a part of the required work of all courses leading to a degree. From November 1 to April 1, two hours per week of gymnasium work are required of all Freshmen and Sophomores. Physical examinations.

It is not proposed to develop a few record breakers or champions in any sport, but to keep all our students in such physical condition as will secure to them the best results from their college course. The possible evils of competitive sports are guarded against so far as possible, and no minor is permitted to compete in intercollegiate contests without the written consent of parent or guardian, a certificate of physical ability from the Director, and proper training under his supervision. The results of the gymnasium training have been most satisfactory. The students generally acknowledge that they feel better and are able to do more work, and the Faculty testify that there have been better results accomplished in the class room since the gymnasium was opened.

LEHIGH UNIVERSITY.

The gymnasium is open afternoon and evening; in all, forty-five hours a week. Exercise in it is required of all students who are fitted to take it. Class drill with the instructor and individual exercise are prescribed.

LAFAYETTE COLLEGE.

ONE MEDICAL DIRECTOR. PHYSICAL EXAMINATIONS.
ATHLETIC CERTIFICATES, ETC.

A thorough system of physical culture, participated in by all the students, who are required to be in the gymnasium at set times for class drill. The gymnasium is also open at given hours for voluntary work.

WESTERN RESERVE UNIVERSITY.

All members of the Freshman class are required to take systematic exercise three times weekly during six months of the year, under the direction of a competent instructor.

VANDERBILT UNIVERSITY.

Attendance upon the gymnasium is obligatory upon all matriculated in the Academic and Biblical Departments, unless excused on ground satisfactory to the Chancellor. The gymnasium is open to all members of the University for voluntary exercise.

Credit is given for systematic work in physical training, three hours of exercise being equivalent to one hour's work of recitation. The gymnasium work consists of individual and class exercises arranged according to age, strength, and ability of the student. It is understood, however, that this hour allowed to physical culture shall be counted in addition to, and not as a substitute for, the hours already required for a degree.

UNIVERSITY OF OREGON.

PHYSICAL EDUCATION — ELEKTIVE.

Course for teachers; theory and practice; counts for full course towards diploma.

UNIVERSITY OF CHICAGO.

ONE ASSOCIATE PROFESSOR. TWO TUTORS. THREE ASSISTANTS.

Class work in physical culture is required of all undergraduate students not excused on account of physical disability, during four half hours a week. Six quarters' work in physical culture is required of Academic College students, and four quarters of University College students. Students taking an excessive number of cuts will not be allowed to continue their university work until they shall conform to the requirements. Students are given choice of hour and course. Courses are offered in prescription work, general class drill, and athletic training. Each course is so

arranged that those who take part in it receive work which tends to symmetrical development.

Periods of exercise — 8.45, 9.45, 10.45, 11.45, A.M; 5.15 P.M.

Training for any of the University teams will be accepted as an equivalent for gymnasium work.

LELAND STANFORD UNIVERSITY.

ONE PROFESSOR. ONE INSTRUCTOR. TWO ASSISTANTS. 691 MEN;
378 WOMEN; 1069 TOTAL. 346 TOTAL IN HYGIENE. THOMAS D.
WOOD, PROF. OF HYGIENE AND ORGANIC TRAINING.

1. Gymnasium Exercises. One hour, both semesters. Individual and class work, with and without apparatus. Open to all students under the advice of the Medical Director. One hour of credit will be given for systematic prescribed exercise; three exercises a week to be taken on separate days, arranged according to work of student.
2. Personal Hygiene.
3. Sanatory Science.
4. School Hygiene.
5. Hygiene of Sex.
6. General Anatomy and Physiology.
7. Animal Physiology.
8. Applied Anatomy and Physiology.
9. Kinesiology and History of Gymnastics.
10. Special Gymnasium Training, — includes individual and class exercise, use of all kinds of apparatus, calisthenics, light and heavy gymnastics, health and medical gymnastics, gymnastic games. Five hours of exercise a week (two hours' credit), both semesters.
11. Anthropometry.
12. Special courses.

UNIVERSITY OF ILLINOIS.

ONE INSTRUCTOR (*men*). ASST. PROF. EVERETT. ONE INSTRUCTOR (*women*). MISS MORRISON. ASST. PROF. SUMMERS. TOTAL, 855.

1. Gymnasium and Field Practice required in winter term twice a week, as part of military science; one fourth credit counted.
2. Lectures and Practical Demonstrations. This course is offered to students who wish to gain a better comprehension of the value of physical exercise, its use and abuse, how to train properly for athletic contests, and thus avoid the ill effects which too often follow a course of athletic training. Course continued during fall and winter terms. Applied Anatomy and Physiology of Exercise and Hygiene, once a week, fall and winter terms. One fifth study; for both sexes.

Required University examination in entrance Physiology.

NORTHWESTERN UNIVERSITY.

ONE DIRECTOR. GYMNASIUM WORK OPTIONAL, BUT EXTENSIVE REGULATIONS GOVERNING ATHLETICS. TOTAL, 3016.

Mostly professional and graduate departments.

UNIVERSITY OF CALIFORNIA.

WALTER E. MAGEE. TWO MEDICAL EXAMINERS. DIRECTOR OF PHYSICAL CULTURE. TWO ASSISTANTS.

1. *Elementary Course*. The seventeen setting-up exercises described in the Drill Regulations of the U. S. A. The use of Sargent's developing apparatus explained and illustrated. Chest weights, dumb-bells, bar-bells, and Indian clubs. Exercise in walking, running; mattress exercise, parallel bars, horizontal bar, etc. Three half hours throughout the year. Prescribed to all male undergraduates during the first year of their attendance at the University.
2. *Advanced Course*. Heavy apparatus. Three half hours throughout the year. Prescribed to all undergraduates during the second year.

3. *Course for Women.* Ten hours throughout the year. Elective three half hours for two years.

UNIVERSITY OF KANSAS.

REV. H. W. COWAN (PRINCIPAL). MAY M. PIERCE CLARK,
INSTRUCTOR. TOTAL, 895.

Gymnasium work required of Freshmen and Sophomores three times a week.

THE INDIANA UNIVERSITY.

ONE DIRECTOR OF MEN'S GYMNASIUM. ONE DIRECTOR OF WOMEN'S
GYMNASIUM. TOTAL, 879.

Harvard System of individual and class work and examinations.

Regular class work, or individual work for those unable to take class work, is given three days a week from the middle of October to the first of May. In order to receive credit, there is required, in addition to the exercises, either a course of lectures on the care of the body, or a course of prescribed reading with written reviews. The credit is equal to that of a one-hour recitation once a week, or three fifths credit for the year.

YALE COLLEGE.

ONE DIRECTOR. TWO ASSOCIATE DIRECTORS. SPECIAL INSTRUCTORS.

Course similar to that at Harvard, with addition of this requirement: —

Vote of Corporation, Required that every man who presents himself for exercise in the gymnasium, or who desires to use its privileges, should first submit to a physical examination by one of the Directors; or, in default of such an examination, should bring from his physician a written certificate (the form to be furnished by the Directors) that he is physically sound, or a written certificate from his parents or guardian that he wishes the student excused from the examination, and that he himself will take the responsibility of exercising without a previous examination.

Charge for tub and tank baths.

WESLEYAN UNIVERSITY.

ONE DIRECTOR OF GYMNASIUM. TOTAL, 301.

Exercise in the gymnasium is required of the men of the Freshman and Sophomore classes three hours a week from Thanksgiving to the end of the winter term. Elective work in the gymnasium is offered to the Junior and Senior classes.

TRINITY COLLEGE.

ONE GYMNASIUM INSTRUCTOR. TOTAL, 131.

The Freshmen and the Sophomores are required to attend two hours in each week for gymnasium practice; and class instruction is also given throughout the year to such other students as desire it.

WILLIAMS COLLEGE.

ONE INSTRUCTOR.

Gymnastic exercise is required of the Freshmen class during first and second terms.

COLBY UNIVERSITY.

ONE INSTRUCTOR FOR BOTH SEXES.

Regular class work in the gymnasium is required of Freshmen and Sophomore classes, one half hour on four days of each week from November until April. The class work for the four years is graded.

1. Dumb-bell exercise, heavy gymnastics, wrestling. Freshman class.
2. Dumb-bells, wands, free exercise. Women of Freshman class.
3. Indian clubs, boxing. Sophomore class.
4. Light gymnastics. (Clubs and fancy steps.)
5. Fencing, single stick. Elective, Junior.
6. Fencing, broadswords. Elective, Senior.

BATES COLLEGE.

ONE MALE INSTRUCTOR. ONE FEMALE INSTRUCTOR. PHYSICAL
EXAMINATIONS. HANDBOOK, CHARTS, ETC.

During the latter part of the fall and all of the winter term each class is required to exercise in the gymnasium under the supervision of the Director. A graded course of class exercise has been arranged. (Similar to that at Colby and Bowdoin.)

Gymnasium for Seniors — optional.

UNIVERSITY OF NEBRASKA.

Gymnasium elective for men. Credit, one fifth of study course for year. Gymnasium required for women.

BOSTON UNIVERSITY.

ONE INSTRUCTOR.

Two courses, three times a week; optional.

Men go to Y. M. C. A. Gymnasium.

TUFTS COLLEGE.

ONE INSTRUCTOR. ASSISTANT PROFESSOR OF CHEMISTRY. INSTRUCTOR
IN PHYSICAL TRAINING.

Regular exercise in the gymnasium is required three hours a week of men students for the two years following entrance, from middle of November to the middle of March. The work of Physical Training is optional during the remaining years of the course.

Graded work, based on individual exercise and class exercise, with light and heavy exercise.

AMHERST COLLEGE.

TWO MEDICAL DIRECTORS. ONE INSTRUCTOR. FOUR CLASS
CAPTAINS, AND STUDENT ASSISTANTS.

Besides the exercise which every student may take for himself, the members of each class exercise together in the gymnasium every

week day except Saturdays and Wednesdays. Unless excused for physical disability, the attendance of every student is required at the gymnasium for the performance of the exercise in light gymnastics.

The results of the system of prescribed gymnasium training pursued at the college have been eminently satisfactory. While hygienists affirm that as a general rule the health of a young man from fifteen to twenty-five years of age is apt to decline, the reverse rule is found to prevail with students here. From statistics systematically kept for more than twenty years, it appears that the health of an Amherst College student is likely to grow better each year of his collegiate course. The average health of the Sophomore class is better than that of the Freshman, and of the Junior better than that of the Sophomore, and of the Senior class best of all. This average, moreover, is shown to come from the improvement in the physical condition of the student, and not from the absence of those who drop out of the course because physically too weak to complete it.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

Military drill required three hours per week.

Gymnasium optional.

DARTMOUTH COLLEGE.

ONE INSTRUCTOR.

FRESHMAN YEAR — 1ST AND 2D TERMS.

First Term.

1. Lectures of Human Anatomy and Physiology and Personal Hygiene. Ten exercises one hour a week.

First and Second Terms.

2. A gymnasium exercise of one hour's duration is required on four afternoons weekly, from December 1 to April.

UNIVERSITY OF MICHIGAN.

TWO MEDICAL DIRECTORS. FIRST YEAR.

In the conduct of the gymnasium the aim is not so much the development of a few gymnasium experts, as the provision of wholesome physical exercise for the many. Thus far the work has been voluntary.

RUTGERS COLLEGE.

ONE MEDICAL DIRECTOR.

For the Classical Section of the Freshman and Sophomore classes, attendance at the gymnasium exercises is required four half-hour periods weekly throughout the year.

Graded exercises for both Classes. Bowdoin method.

Swimming taught in spring-time.

OBERLIN COLLEGE.

Course in Physical Training for both sexes, including studies, lectures, and exercises.

UNIVERSITY OF PENNSYLVANIA.

ONE MEDICAL DIRECTOR. ONE INSTRUCTOR. HARVARD METHODS.

Students in the Freshman class of the college are required to attend one lecture in Physical Education per week, throughout the year. Every student in the class must pass an examination on these lectures semi-annually, unless his work has been of sufficient merit to warrant exemption.

BOWDOIN COLLEGE.

ONE MEDICAL DIRECTOR. SEVERAL STUDENT ASSISTANTS.

A brief course of lectures on human anatomy and physiology, illustrated by means of the extensive collections and models of the Medical School, and followed by a similar course on personal hygiene, is given each class upon entering college.

The Director of the Gymnasium gives each student a thorough medical and physical examination at the beginning of the college year. From the measurements and strength tests taken a chart is made out for each student, showing his size, strength, and symmetry in comparison with the normal standard, and also what parts of the body are defective either in strength or development. At the same time the student receives a hand-book containing the exercises prescribed for the purpose of correcting the physical defects shown by his chart, with specific directions in regard to diet and bathing.

During the winter term each class is required to exercise in the Sargent Gymnasium, under the supervision of the Director, for a half hour on four days of every week. A graded course of class exercise has been arranged. The Freshmen have military drill and Indian club swinging; the Sophomores, wrestling and dumb-bell exercises; the Juniors, boxing and fencing with single sticks and broadswords; the Seniors, fencing with foils. For the exercises with the chest weights, bars, rings, etc., each class is divided into three divisions, and the work is carefully graded to suit the strength of each division.

Physical exercise was required at Princeton from 1869 to within a few years ago, when the plan was abandoned on account of the meagre accommodations of the gymnasium.

The University of Pennsylvania has two instructors who received their supplemental training at our Summer School, but they have only a small gymnasium, and the only requirement that bears upon physical training is the attendance of the Freshmen upon a course of lectures on Physical Training and Hygiene.

The students at Columbia have used the city gymnasiums in New York until the present time. The change of location on the part of the University has made a new gymnasium necessary, and a large, finely-appointed structure is now being erected for this purpose.

In view of the influence that Harvard has had in establishing gymnasiums and departments of Physical Training in other institutions, it would seem to be no more than just that her own students should have as good an opportunity to learn of Harvard's better methods in Cambridge, as they would had they entered some of the colleges on the Pacific Slope or in the adjacent States in New England.

I regret to add that under our present regime we cannot give the average student anything like the same quality, quantity, or variety of gymnastic work that he can get from our own pupils who are teaching in other institutions, simply because the average student with us lacks the same incentive to regular systematic physical work that is held out to him in other colleges and in other departments of instruction in our own University.

Perhaps it is not altogether desirable that the educational side of Physical Training should be advanced at Harvard. If, however, the authorities do desire to extend and improve the educational side of the subject, I would state that the first step necessary is to put the work of the Department of Physical Training on the same footing as the other departments of the University.

All of the arguments in favor of the present system in the departments of mental training are equally applicable to the Department of Physical Training, while all of the arguments in favor of the present system of Physical Training are applicable to those of mental training. Justice and equality are what the present situation calls for.

As a means for advancing the cause of physical education at Harvard I would recommend for consideration some of the features set forth in the following schemes :

1. The requirement of a physical examination from every student upon entering the undergraduate departments of the College, and every year thereafter until the year of graduation; these examinations to include the usual tests of health including others to test power and working capacity. The moral effect of these examinations would extend down into the primary and secondary schools and work great good to the community. The teacher would soon learn that he could not cram his pupils' minds at the expense of their health, and the pupils would acquire in early youth the habit of keeping themselves in good physical condition.

The requirement of a physical strength test in addition to the usual physical examination of those students who desire to get on the athletic teams has raised the standard of the examinations passed by the Freshmen very perceptibly within the past two years. These tests could easily be graded to meet the conditions of advancing age and strength, and are of such a nature as to appeal to a young man's pride and manliness.

This scheme would leave all physical exercise optional, but would hold over each student the requirement of an improved

physical condition from year to year, to be determined by an actual test. It is nearer being realized at the present time than any other, and all of the athletes and scholarship men are now required to be examined, and these form a considerable portion of those using the gymnasium.

This plan could be carried out for an additional expense of \$2,500 a year. This sum would furnish us with another regular instructor, and such medical assistance and clerical help as we should be obliged to have at certain times during the year. This sum would also secure us some service for statistical work of which the College should now be able to avail itself for scientific results and advertising purposes.

2. The second plan would be to require physical examinations and gymnasium exercise for three hours a week of all the members of the Freshman class; this work to be supplemented by required attendance upon one lecture a week on Physical Training and Hygiene throughout the year. The physical exercises and lecture to be counted for one half-course towards a degree.

If the exercises consisted of a single dumb-bell or wand drill in which a large number of men could participate at one time, and if the classes could come to the gymnasium during the forenoon hours, the work could be handled by the addition of two more instructors, at an expense of \$2,400.* The same plan could be carried out during the afternoon hours if the asphalt area back of the gymnasium could be roofed over so as to give us additional covered floor space.

If elective courses were allowed this would require more instructors, as the work would be carried on at different parts of the gymnasium at the same time. More instructors would also be necessary if the class was divided into many sections, so that much of the work would have to be repeated at different hours. If this work could come during the forenoon, a part of the instruction could be hired by the hour, as the services of some of the teachers in Boston could be secured at that time. The elective courses would require an additional expenditure of at least \$3,000, depending upon the number of electives allowed.

3. A third plan would be to have a graded course of physical

* This estimate does not include the cost of the lectures, as I have presumed upon present members of the Faculty being willing to give them.

exercises extending over four years, in which the regular work of the gymnasium, including boxing, fencing, wrestling, single stick, swimming, rowing, running, jumping, etc., should be taught to the whole College as it is now taught to the members of the Summer School. This plan would embrace a broad system of electives, and call for a considerable number of instructors.

I do not see how such a system could be started in the Freshman year for less than an additional cost to the department of \$12,000. But after the system was once started a great deal of assistance could be rendered by Price Greenleaf men, and the members of the different athletic organizations. This plan would enable the University to realize the highest results from the standpoint of Physical Training, and solve some of the troublesome athletic problems.

Inasmuch as the alumni, students, and friends of the University already expend over \$50,000 annually in order to get fifty men in condition to participate in a few athletic contests, — presumably to show the world at large what Harvard is doing in the way of Physical Culture, — it would seem that at least one fourth of this sum could be raised annually for giving the mass of students who need it some of the physical instruction and training now lavished on the favored few.

In all the plans mentioned I should recommend the giving of some sort of credit for faithful attendance and for work actually done. This softens the requirement, and does away with the sting of punishment for not doing something for which the student is given no credit if he does do.

Wherever the credit system has been introduced it has been an admitted success. I enclose a letter from President Hyde, of Bowdoin College, bearing upon this point. It will be remembered that President Hyde is a graduate of Harvard, and perfectly familiar with our present system. (See letter.)

None of the plans suggested would interfere with the present system of voluntary exercises and examinations at the gymnasium, except to limit them to certain hours. The present athletic work of the students would come under certain restrictions as to time and place, and credit for work done in athletics should be accepted as an equivalent for the prescribed work.

This plan would enable the department to exercise a certain amount of supervision over the athletic training of the students,

as the students who took athletics as an equivalent for gymnastics would have to be held accountable for their work.

The recommendation of some members of the Faculty that a certain amount of additional mental work be prescribed with the physical exercise, in order to entitle the course to rank towards a degree, does not seem to be advisable, except perhaps for the Freshman class. The men whom we most desire to reach have all the mental work that they can carry and maintain their health, while many of the athletic men could be braced up in their mental efforts by requiring a higher grade of work in their present courses. If, however, a certain rank in studies was required in order to have the physical work count towards a degree, there would be a possibility of shutting out a few students who do poor work in their studies on account of poor health and want of physical vigor.

Requiring the members of the Freshman class to attend lectures on Hygiene and Physical Training would, I think, be an admirable thing, and enable the department to give these new men, at the outset of their course, some valuable advice. But if time for both could not be given, I have no hesitation in saying that applied hygiene, *i.e.*, physical exercise, etc., would be the more desirable.

If physical exercise were prescribed, the rank men, as a class, would take the highest stand in these courses at Harvard, as they did at Yale when I introduced required gymnasium work twenty years ago. In this connection it may be interesting to note that the rank men at Harvard during the past sixteen years, some 1780 in all, surpass the average student (the average table including the athletes) in height, weight and physical strength. Curiously enough, the dropped men exceed the rank men in height and weight, but fall below them in physical strength. This shows conclusively to my mind that the men, as a class, who survive the four years' strain of a college course, and come to the front on commencement day, must possess more than the average physical strength and vigor, and that this is a matter of nervous energy and brain power, as well as of bone, muscle, and sinew. These are frequently matters of inheritance, but where they do not exist I maintain that it is the duty of a college to avail itself of every opportunity to improve the condition of the body as a fundamental basis for the development and improve-

ment of the mind. I know of no better way of accomplishing this desired object than by making physical and mental training a part of the same curriculum, and by rewarding by the same method every conscientious and faithful effort towards physical and mental improvement.

D. A. SARGENT, *Director*.

CAMBRIDGE, Feb. 24, 1897.

TABLE No. 1.

Year.	Lockers.
1880	474
1881	474
1882	591
1883	809
1884	837
1885	901
1886	937
1887	937
1888	1055
1889	1055
1890	1175
1891	1175
1892	1333
1893	1441
1894	1441
1895	1447
1896	1506
*1897	1544

* Year not complete.

TABLE No. 2.

PERCENTAGE OF MEN IN CAMBRIDGE DEPARTMENTS HOLDING LOCKERS.

Year.	Per cent.
1880	45
1881	44
1882	53
1883	69
1884	69
1885	66
1886	69
1887	63
1888	68
1889	61
1890	63
1891	54
1892	57
1893	55
1894	56
1895	52
1896	52

TABLE No. 3.

DISTRIBUTION OF LOCKER HOLDERS AMONG CLASSES AND DEPARTMENTS.

		Percentage using Gymnasium.	Percentage using Library.
Freshmen	273	65	60
Sophomores	287	60	67
Juniors	210	55	96
Seniors	192	58.6	90
Special	101	63	76
	1063		
Lawrence Scientific School .	190	51	37
Law School	205	43	40
Divinity School	12	32	90
Graduate School	88	29	74
Medical School	12	.	.
Dental School	4	.	.
	1574		

TABLE No. 4.

NUMBER OF STUDENTS TAKING PHYSICAL EXAMINATIONS.

Year.	First Ex.	Total Ex.
1880	579	625
1881	245	425
1882	300	545
1883	278	642
1884	280	639
1885	286	773
1886	287	773
1887	310	775
1888	333	877
1889	338	875
1890	356	1004
1891	410	1138
1892	477	1227
1893	481	1153
1894	485	1263
1895	482	1124
*1896	377	965
†1897	473	767

* Gymnasium undergoing repairs.

† Year not complete.

TABLE No. 5.

CERTIFICATES FOR ATHLETICS GRANTED DURING THE YEAR 1896.

1. University Foot-Ball	68
2. Class Foot-Ball	121
3. University Base-Ball	32
4. Class Base-Ball	62
5. University Crews	11
6. Class Crews	32
7. One Mile Run	27
8. 880 Yards Run	31
9. 440 Yards Run	31
10. 390 Yards Run	25
11. 290 Yards Run	25
12. 220 Yards Run	45
13. 100 Yards Run	51
14. Low Hurdles	20
15. High Hurdles	16
16. One Mile Walk	6
17. Bicycle	15
18. Broad Jump	24
19. High Jump	12
20. Pole Vault	20
21. Shot	11
22. Hammer	11
23. Fencing	4
24. Lacrosse	17
25. Ice Polo	6
Total	723

TABLE No. 6.

*GYMNASIUMS HAVING THE HARVARD SYSTEM OF APPARATUS.

Schools and Colleges	263
Young Men's Christian Associations	310
Athletic Clubs	72
Sanitariums, private and miscellaneous	95
Total	740

* This table is completed up to 1893.

TABLE No. 7.

COLLEGES REQUIRING GYMNASIUM WORK THROUGHOUT THE COURSE, AND
GIVING CREDIT.

Brown University, H; Johns Hopkins University, H; Indiana University, H2;
Vanderbilt University; University of Illinois, H; Bowdoin College, H.*

COLLEGES REQUIRING GYMNASIUM WORK FOR FRESHMEN AND SOPHOMORES, AND
GIVING CREDIT.

Dickinson College, H.

PRINCIPAL COLLEGES HAVING THE HARVARD VOLUNTARY SYSTEM.

Yale University; Michigan University, H; University of Pennsylvania, H2;
University of Virginia, H; Princeton University.

COLLEGES REQUIRING GYMNASIUM WORK THROUGHOUT COURSE.

Amherst College, H; Bates College, H; Bryn Mawr (prescribed), H; Dartmouth College, H; Oberlin College, H; Swarthmore College, H; University of Chicago, H; Vassar College, H4.

COLLEGES REQUIRING GYMNASIUM WORK FOR FRESHMEN AND SOPHOMORES.

University of Wisconsin; University of California; University of Kansas, H;
Lehigh University, H; Wesleyan University, H; † Western Reserve University;
Colby University, H6; Haverford College, H; Lafayette College; Trinity College, H2;
Rutgers College, H2; Smith College, H; Tufts College, H; Cornell University;
† Williams College, H; † Wellesley College, H.

COLLEGES OFFERING GYMNASIUM WORK AS AN ELECTIVE, AND GIVING CREDIT.

Leland Stanford University, H2; University of Oregon, H; Oberlin College, H3.

* Colleges marked H have gymnasium instructors trained at Harvard.
Required for Freshmen only.

(Copy.)

PRESIDENT HYDE'S LETTER.

BOWDOIN COLLEGE,
BRUNSWICK, ME., March 23, 1896.

DEAR DR. SARGENT, — In reply to your inquiry concerning our method of ranking work in the gymnasium, it gives me pleasure to report as follows : —

The work in the gymnasium is counted as one thirteenth of the total work of the year. It is required of all students, and is the only work except themes required after the Sophomore year. The maximum mark is given to all students who attend every exercise. Deductions from this maximum mark are made in proportion to the number of exercises from which a student is absent. Theoretically the instructor has a right to deduct from this maximum work on the ground of listless or perfunctory performance of the exercises, but as all exercises are under the eye of the instructor, practically no such neglect of work is allowed, and consequently there are no deductions to be made on that score.

The plan has been in operation ten years ; it works with very little friction, is extremely effective, and gives general satisfaction. We succeed in requiring every student to take systematic, vigorous exercise four times a week during the winter months, each of the four years. This is partly due to the interesting nature of the exercise. Every student learns to spar and to fence, in addition to the usual gymnastic exercises. The recognition of it in the rank is a great help, however, in making the exercises respected, and securing its uniform observance.

It tends on the whole to raise the rank ; but as this applies to all students alike, in proportion to the regularity of their attendance, it involves no injustice. In the course of ten years perhaps three or four students have escaped being dropped on account of the help given to their rank from this source. In these ten years it has been necessary once or twice to require a solid block of postponed exercise to be taken in the spring as a condition of graduation. That, however, was in the early days of the requirement, when students were disposed to test the question whether the requirement was a

real one or not. For the past four or five years we have had no trouble in maintaining the requirement without resort to penalties of any kind.

Very truly yours,

(Signed) WM. D. W. HYDE.

(Copy.)

BOSTON, March 27, 1897.

HENRY W. PUTNAM, Esq.,

No. 85 Devonshire St., Boston.

DEAR SIR, — I have carefully read Dr. Sargent's interesting report with its recommendations for improving the physical work at Harvard, and I heartily agree with his opinion that efforts should be made at once to induce the rank and file of the student body to give more attention to their physical welfare. During my three years of residence at Harvard, I felt that there was great need of more systematic gymnastic work for the men who are not candidates for athletic teams and who take no regular exercise, of course realizing that the crowded condition of the gymnasium would not then admit of much development in that line. I talked with many men at Cambridge on this subject, and believe that compulsory gymnastic work would be welcomed. It would be subject, of course, to the usual senseless objections that follow any innovation. I have heard many times remarks by students like this: "I know that I ought to go to the gymnasium and intend to do so, but it seems to be such a task to change my clothes, and my room seems so much more comfortable, that I neglect to take the exercise that I need."

If the gymnasium work were to count towards a degree, these men who believe in it but neglect it would have an incentive that would bring them out. Judging from my observations at other colleges and schools, I think that violent objections and indifference to required physical work are to be expected during its first year. This disappears in about two years. It is improbable that two men would agree on the details of any plan, but I believe that the adoption of any of the schemes of Dr. Sargent, as given, would be a step in advance.

I would advocate required work during the Freshman year under any plan. If I were to choose, for next year's work, between the

plans presented by Dr. Sargent, I would combine Plans 1 and 2 to include the following elements : —

(a) Requirement of examinations for all students, as given in Plan 1.

(b) Required work for Freshmen, as given in Plan 2.

(c) Required work for such individuals of other classes as the examinations should show to especially need it.

(d) Allowing (b) and (c) to count for a half course, requiring perhaps attendance upon lectures as mentioned by Dr. Sargent.

(e) During the second year of work under this plan, I would have elective work for Sophomores, possibly extending to other classes in later years, thus gradually working into Plan 3.

Natural diffidence keeps many students from entering the gymnasium. This would be overcome by required work during the Freshman year. The success of Dr. Sargent's afternoon class in drill work, attendance upon which is optional and for which no credit is given, demonstrates that many students need only opportunity and encouragement to induce them to pursue systematic physical training.

Very truly,

(Signed) WM. F. GARCELON.

INDIANA UNIVERSITY,
BLOOMINGTON, IND.

MY DEAR MR. SARGENT, — You asked in a letter some time ago about the workings of Physical Training here, where it counts for a degree. I shall gladly explain the best I can. The university system here is one of credits — sixteen full credits entitling one to a degree, I believe; some courses count one credit and some less. For three terms' consecutive work in the gymnasium one is allowed a three-fifths credit. I am sure that this fact induces many to take the work. It is not wholly confined to the gymnasiums, but if a student can satisfy the instructor that he has performed an equivalent amount of regular work — say during foot-ball training — it can be substituted for indoor work for the time being. This means, of course, that all men on the foot-ball field should in some way have regular exercise and not spend time on "side lines;" but with some planning this can be managed. This substitution of work brought into the winter classes in the gymnasium nearly all the foot-ball squad, which to my mind was a good thing.

The idea is to stimulate regular physical exercise of some kind. If one likes to work out doors, all right, provided he does it with regularity and system and the instructor can be satisfied that he does do it.

Very truly,

(Signed) MADESON G. GONTERMAN.

P. S. — Mr. Gonterman will be remembered as one of Harvard's prominent foot-ball players two or three years ago.

D. A. S.

MINORITY REPORT.

I am unable to join in the recommendations for change in the manner of appointing the Athletic Committee.

That committee is a part of the administrative machinery of the University having charge of a very difficult and important subject, and should, I think, — except as to its undergraduate members, — be appointed, as other college officers are, by the corporation and confirmed by the overseers. Inter-collegiate contests need, in my opinion, more rather than less restriction than they now have, even since the reforms of recent years were introduced, and I think the Board of Overseers more likely, by reason of the manner of election of its members, to yield to the outside pressure of graduates for more games, especially at a distance from Cambridge, than the corporation is. If the corporation was ever in danger of nominating graduates who were too strict in this regard, it is not likely to do so now when one of the Fellows has himself served on the Athletic Committee and another is generally recognized as the warmest friend and patron of rational athletics in any of the Governing Boards, or in the whole graduate body; and I cannot doubt that if unsuitable nominations were made the overseers would reject them until proper ones were sent in.

The appointment or election of administrative officers is not an appropriate function for a large elective legislative body, and would, in the end, impair the character and usefulness both of the Athletic Committee and of the Board of Overseers, besides depriving the University and the public of the salutary check of a confirming as well as an appointing body. I do not think it would command the confidence of the undergraduate body any more than the present method does,

for I think few if any students distinguish between the different boards or know much about them ; and if it would, I think that such increased confidence would be purchased at too dear a price. Under the conditions of our American life, society, and present public opinion, the temptation to an excessive number and intensity of intercollegiate contests is practically irresistible to undergraduates, individually, as a body, and in their athletic organizations, as well as to many, if not most, parents and guardians ; and rigid control of the subject by the chief executive of University government is absolutely essential to the cause of education. I should say the graduate members of the committee had been hitherto sufficiently representative of the better sentiment among the graduates, and believe they will continue so, and that they should be more, rather than less, restrictive in their tendency and inclinations than they now are.

With regard to the undergraduate members, there would be some advantages in having the three principal captains *ex-officio* members if they could be assumed to know and care about track, tennis, and other athletic matters, and to be able to sit judicially in matters concerning their own and each others' teams in which they are petitioners ; but as the Committee has the confirmation and rejection of their appointment as captains, and the power and duty of removing them for cause, it is difficult to see how they could with propriety sit upon the committee. I am told, also, that they have generally declined to serve for lack of time, and that they are invited to be present when the interests of their teams are concerned. Moreover, if any real progress is to be made towards undergraduate self-government and management of intercollegiate athletics, it must be through the students learning to select from their own number representative, judicial-minded men outside of the teams, and then learning, as a body, to acquiesce in and sustain their action. I am told they have done well and have improved in this respect hitherto.

I concur fully in the other recommendations of the committee, — especially the proposed introduction of moderate required gymnastics during the winter months of the Fresh-

man year, having recently seen the system in operation at Brown University, where it is required all through college, and having heard there none but the most favorable accounts of its working and popularity. A rational and systematic physical training for the great body of students who do not and cannot get onto athletic teams seems to me the most essential step to take next, and it seems to me as vital and fundamental a preparation for the work in life of an educated man as English, — and more so than French or German, — the present required Freshman studies. I would give a small credit for it—equivalent to a quarter or half course—towards the degree, but in addition to the present 18.4 courses, not as a substitute for something else within that total.

HENRY W. PUTNAM.

BOSTON, April 9, 1897.

LXIV.

REPORT OF THE COMMITTEE TO VISIT THE MUSEUM OF COMPARATIVE ZOÖLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee to visit the Museum of Comparative Zoölogy has the honor to report that it has met at least once a year in the last six years, and at the Museum with the Curator each of five years.

A majority, often a large majority, of the committee has been present at each meeting.

Several meetings have been held in Boston and efforts have been made to raise funds to meet the urgent needs of the Museum, but unfortunately without success. During the year just passed, friends, pupils, and admirers of Professor Agassiz, independently of this Committee, have attempted to secure a sufficient sum of money for a memorial to commemorate the fiftieth anniversary of the arrival in this country of one whose work here has marked an epoch in the history of the College and of the country. But the financial troubles of the past summer took away every promise of success.

The sum of \$240,000 has been received by the Museum at various times from the Commonwealth, and \$1,340,000 have been given by friends and by the family of Professor Agassiz up to the beginning of 1895.

The endowment fund of \$580,000 has not been increased since 1874, and its income has been materially decreased with the fall in rates of interest, so that, with increasing needs, the Museum has less means of meeting the greater demands upon it, and cannot now even purchase the books and journals needed in its various departments.

In one of its previous reports, your Committee has detailed the various wants of the Museum, which naturally have expanded with the accumulation of work and through the greater number of students, so that the present building and opportunities for research and instruction are even less adequate than at the time of that report.

A larger sum of money for construction, arrangement of specimens, etc., and a very much increased permanent income are absolutely

necessary, if the Museum is to be only kept abreast of the times, much more to place it where so important a part of a great university belongs, and worthy of its distinguished founder.

CHARLES F. FOLSOM,
THEODORE ROOSEVELT,
A. LAWRENCE LOWELL,
LOUIS CABOT,
F. L. HIGGINSON,
DUDLEY L. PICKMAN,
WILLIAM BREWSTER.

Boston, January 13, 1897.

LXV.

REPORT OF THE COMMITTEE ON INSTRUCTION
IN ZOÖLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee earnestly recommends the establishment of a small aquarium in which aquatic animals can be raised and kept for study and experimentation. The expenditure of one thousand dollars for this purpose would make a very creditable beginning and of immediate value to the teaching in this Department.

The basement of the Museum affords ample room for such a plant, which could be so planned that the few aquaria now recommended would be a permanent part of any increased equipment of the future.

The Committee believes that the value of the course in Zoölogy would be greatly enhanced if better facilities for instruction in Physiology in direct connection with the instruction in Zoölogy could be offered. This subject, however, is one that requires further consideration and will be more fully discussed in next year's report.

CLARENCE J. BLAKE,
EDWARD G. GARDINER,
WILLIAM BREWSTER.

May 1, 1897.

REPORT OF THE COMMITTEE TO VISIT THE ITALIAN DEPARTMENT.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The undersigned, having attended lectures in the various courses of the Italian Department, and having conferred with its instructors, report as follows:

Although seventy-eight students are this year taking Italian — a number which would have been thought large a few years ago — we believe that the usefulness of the language and its literary and philological importance warrant an ampler course of instruction than Harvard has yet offered. Italian has never been put on an equality with the other modern languages here, and consequently the scheme of electives in it is still inadequate. In the day of small things, instruction centered in the study of Dante; and as Harvard had such teachers as Professor Longfellow and Professor Lowell, students elected Dante as much to be with these eminent men as to master “The Divine Comedy.” For a similar reason, a gratifying number now elect Professor Norton’s course. But while Dante must always be for literary students a sufficient object for learning Italian, the expansion of Comparative Philology and of Comparative Literature requires that Harvard should provide not only for Dante but for the Italian language as a whole, under this wider aspect. At present, the Italian Department has to struggle against the difficulties of an imperfectly articulated scheme of instruction.

A properly organized system would embrace at least five courses, viz.: 1, the writers of the twelfth and thirteenth centuries; 2, Dante; 3, the Renaissance; 4, Modern Literature, from Galileo to Carducci; 5, an elementary course.

The first named course, covering the beginnings of Italian Literature, would be indispensable to students of Romance Philology on the one hand, and to students of Comparative Literature on the other. The second course, devoted to Dante, should interpret the genius of one of the three world-poets, not to know whom is to lack symmetrical culture. The third course, on the literature of the Renaissance, would deal with a subject important in itself, important in its bearings on the art and history of a remarkable stage in human

progress, important further in its influence on French, Elizabethan, and subsequent literature. The fourth course, bringing the study of Italian Literature down to the present, would open to the student the thought of Galileo, Vico and Campanella; it would guide him to the best works of Metastasio, Goldoni, Alfieri and Parini; it would unlock for him the ideas of Rosmini; it would introduce to him the chief poets and prose-writers of this century. The fifth course would remain, as at present, for beginners.

The scheme thus briefly outlined could be put in operation by the addition of a single course — the fourth — which would be particularly welcome to students who had passed the elementary course successfully and who wished exercise in rapid reading and in higher composition. This addition would also permit such modifications in the existing advanced courses as would bring each into logical, organic relations with the others. There are several important branches of knowledge in which contemporary Italians have produced works of recognized authority. The student of psychology, for instance, cannot afford to ignore the writings of Lombroso, Mantegazza, Ferrero, Morselli, and others; the political economist needs to know the theories of a school of Italian economists; the specialists in folk-lore and in the recent criticism of art must turn to De Gubernatis and Pitrè, or to Morelli (although the latter wrote also in German), if they would be abreast of the times in those subjects; and students of recent European history and diplomacy can reach much significant material only through Italian. The facility acquired in the course just described would give American students access to all these sources. Moreover, such a course, with the readjustment of the entire scheme of instruction in Italian, would raise this language to the position it deserves.

In looking over the Elective Pamphlet we rejoice to see that Harvard offers three courses in Assyrian, one in Ethiopic, one in Phœnician, and one in Babylonian Bilingual Hymns; such profusion of instruction in recondite subjects befits a great university. But does not the apparent neglect to put Italian on a proper footing throw discredit on Harvard? Earnest students have a right to infer that the authorities hold this language in disesteem when they read in the Elective Pamphlet the notice that "Italian 1 and Spanish 1 cannot be taken in the same year." It is conceivable that a high-grade student might wish to pursue Italian and Spanish simultaneously; why should the authorities imply that in so doing he would waste his time? If Italian 1 and Spanish 1 are "soft" courses, the remedy should be to make them harder, not to cast suspicion on the

value of those languages. Any student can take Ethiopic 1 and Phoenician 1 in the same year; why should not the University raise Italian and Spanish to a similar level of dignity? If the elementary courses have proved for some students a time of repose before going forth to the activities of polo and golf, the blame should not be laid on Italian. This language should enjoy equal repute with French or German, although for obvious reasons the number of students who elect Italian will always fall short of the number electing German and French. But it is the duty of a university to keep whatever courses it offers at the university standard.

Accordingly, we suggest that the scheme of instruction in Italian be amplified. The new course we recommend would require another instructor, but we believe that more students will elect Italian in proportion as the authorities make it plain, by laying out a well-rounded, logically-progressive curriculum, that they regard the Italian language and literature as worthy of the best efforts of serious scholars. To do less than this would be to acknowledge that at least in one branch of learning Harvard has accepted an imperfect and unsystematical plan as sufficient.

In conclusion, we would report that much can be done to foster the Italian Department, and the study of Romance Languages in general, by building up the Department's library. Like some of its more favored neighbors, it ought to have a permanent fund: lacking this, it appeals for gifts of money or of books, and the good use already made of its limited resources indicates that such gifts would be well bestowed.

Respectfully submitted,

WM. R. THAYER,

THOMAS WENTWORTH HIGGINSON,

WM. C. LANE.

CAMBRIDGE, April 20, 1897.

REPORT OF THE COMMITTEE ON ENGLISH LITERATURE.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

GENTLEMEN:—In pursuance of the general instructions laid down in your communication to us, we have held a conference with the members of the Department of English, having to do with the teaching of English literature in the College. We gathered from their reports that the changes introduced year before last looking to a diminution of energy in general lecturing, and an increase in specific class-room work had tended to give more precision to the training in English literature. The opinion was freely expressed, however, that the best results could not be looked for until the students who came up from the lower schools had a more generous familiarity with the best English literature as a ground-work for specific edification.

The most interesting single movement in the Department which we discovered was that which had for its object the provision of a departmental library. Such a library had been slowly forming in recent years and was regarded with special favor by the late Professor F. J. CHILD. His death naturally led his associates to raise some monument to his memory which should be fit, and should carry forward in some degree the influence of his noble service as a teacher of literature. No memorial seemed more satisfactory than the permanent establishment of the department's library. Accordingly, an invitation was given to Professor CHILD's former pupils and friends to contribute toward the foundation of a fund which should be invested by the college, and its income devoted to the purchase of books to be in the custody of the librarian, but specially set apart for the uses of the department. The invitation also included gifts of appropriate books.

The response to this invitation has been immediate and generous, and the letters accompanying subscriptions and gifts have borne delightful testimony to the respect and love in which this rare man has been and continues to be held by his pupils. We think it a most happy inauguration of this useful library that it should have this personal element which can never be lost out of the memory of the College. It needs no argument to demonstrate the great service

which such a library must render to the department. With the growth of the university and the absence of domiciliary divisions, it is reasonably clear that the grouping of students will be largely on lines of research. The Department of English, like the other great departments in the humanities and science, tends to a certain independent crystallization, and it needs and should have if not a house of its own, such quarters as will enable it to concentrate its energies to the best advantage. With a well-equipped library for its exclusive use, not only will the officers of instruction be able to carry forward their own researches, indispensable to the enlargement and enrichment of the University as a station of light in the national life, but the students under them will learn by the free use of the library one of the higher arts of individual life which the University must foster, even when it cannot directly impart it.

We hope sincerely that the government of the University will second heartily the action of the Department in this particular by making it possible to put the collection of books in the Child Memorial into suitable quarters, and to provide for its care.

HORACE E. SCUDDER,
T. W. HIGGINSON,
HENRY A. CLAPP,
CHARLES E. L. WINGATE,
ROBERT GRANT.

Boston, 2 April 1897.

SUPPLEMENTARY REPORT.

VISITING COMMITTEE—ENGLISH DEPARTMENT.

HON. CHARLES FRANCIS ADAMS, *Chairman*.

DEAR SIR,—With the consent of the chairman of the English Committee, I add the following note to the report of the chairman, which I have signed:—

In returning to the work of the visiting committees after an absence of some years, I notice a change of opinion upon one point, about which I think there should be a clear understanding. A doubt seems now to exist among both visitors and instructors whether it is desirable for the Visiting Committee actually to visit the classes. Although its name would indicate this duty, there seems an impression that its functions lie in some other direction than personal inspection. This view evidently varies, however, in the different

departments. In the Italian department, to which I am also assigned, the classes have been freely visited and apparently with mutual satisfaction; a meeting being afterwards held at which every visitor and every instructor was present and consultations of mutual value were held, as the report of the committee will show.

When the English department, on the other hand, met with the visitors, the opinion was freely expressed both by the head of the department and by the chairman of the Visiting Committee that it was no longer desirable, even if practicable, that the classes should be personally visited. This was afterwards modified by the head of this department to this extent, that he thought visits "made often enough" might perhaps be of some value. When asked what he would consider often enough, he stated the minimum number at six visits to each course. As he stated the number of courses in English to be 30, this would be practically prohibitive.

From this view of the subject I wish respectfully but very decidedly to dissent, for the following reasons:—

First, because the primary object of visiting the classes is not criticism upon instructors, but to afford to the visitors that knowledge of the general aim and plan of a course which can never be obtained by the study of programmes alone. Fifteen minutes spent in the recitation room are worth more, for this purpose, than learning the whole programme by heart.

Second, because for an observer with any educational experience a single visit to a class room may be of very great value even for judging of the methods and characteristics of a teacher. No one will deny that a single visit may afford the ground for a most favorable impression of the qualities, methods and manners of a teacher; and, if this is so, a single visit may also afford the ground for an unfavorable impression. In military service an inspecting officer is expected to report on the condition of a regiment of a thousand men upon a single inspection, lasting but a few hours, and if he is competent and experienced he can do this satisfactorily. Granting that in the purely intellectual sphere such judgments are more difficult to form, it seems to me an obvious mistake to say that they are valueless unless repeated with such extreme frequency. I have personally visited several of the courses in English and have been received with uniform courtesy, but I should prefer not again to be placed upon the committee if its functions are to be limited in the manner suggested by the head of the department.

I will go farther and add that it seems to me peculiarly undesirable that this practical prohibition of visiting should exist in the English

department. Every resident of Cambridge knows the existence of a widely spread impression that the English department, while strong in the direction of grammar and philology and in the training of careful writers, is not equally strong in creating the love of literature as such and an enthusiasm for the best models. In this respect the loss of Professor CHILD is greatly felt. This opinion may be wholly unjust, but it unquestionably exists in the community outside, and I have heard it strongly expressed by graduate students. It seems to me that nothing could so far contribute to the removal of such an impression if unfounded — or of its source if there is any foundation for it — as the observation of a capable visiting committee.

Respectfully yours,

THOMAS WENTWORTH HIGGINSON.

CAMBRIDGE, April 23, 1897.

LXVIII.

REPORT OF THE COMMITTEE ON FRENCH.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The teaching of a foreign language is always a question of much difficulty. Two different demands are made on the instructors by the fact that students take French with totally different intentions. Many do not expect to visit France, but desire to acquire a thorough knowledge of the literature of the country which includes, if it is to be thorough, some knowledge of mediaeval language and literature. But there are a body of students who take the course for practical reasons only, a desire to be able to speak and understand the language sufficiently to get along if they find themselves in a French speaking country. This requires also the power of writing the language with grammatical correctness.

The first part, viz., the study of French literature, can be carried on successfully in Harvard, and as far as the Committee could judge by personal attendance to the classes under Professor DE SUMICHRAST and others is done conscientiously and with success.

The second part is much more difficult. French is a language which is perhaps the easiest of any European tongue to acquire to a moderate extent, but to be able to speak and write the language really well is of such extreme difficulty that hardly any foreigner succeeds in mastering it. During many years residence in France the members of your Committee could easily count on their fingers the Americans who have succeeded in either writing or speaking French perfectly. It would be entirely impossible to give any student in Harvard this power. We must therefore content ourselves with teaching the rudiments of the language, leaving to after years, and a residence abroad, any attempt to reach a mastery of the many nuances and delicacies of the French tongue. So difficult is this that the French government publish a book to inform the employes how they should address the gentlemen occupying official positions. It is the same with letters where the degree of familiarity which may exist between the writers, the age of the persons to whom letters are written, their social position, etc., etc., are all indicated by nuances of expression.

Your Committee, two of whom have been several years on the Visiting Board, have had occasion many times by hearing classes, or by conversation with teachers to judge of the condition of French teaching in Harvard, and they agree that it is eminently satisfactory. The only suggestion they would make is that in any future increase in the number of professors, still more attention should be paid to the elementary classes, those which teach talking, writing, and understanding the spoken language, and that the classes should be kept very small, as it is only by perpetual repetition and practice that anything can be accomplished, and twenty students are really more than an able instructor can really teach. Classes in literature can of course be much larger as they are for the most part lectures.

DEPARTMENT OF FRENCH.

The courses in the Department are divided into three groups: Primarily for Undergraduates; for Graduates and Undergraduates; Primarily for Graduates.

The first group comprises the Elementary courses properly so called, *A*, *1b*, *1c*, *1a*, *2c*, *2a*, *3*, *4* and *5*. Course *A* is intended for men who have not before studied French and is prescribed for Freshmen who have not presented French at the Admission examination. The number of such Freshmen this year is 35. The greater number of Freshmen present at least Elementary French at the entrance examination. The total number of men in the course is 116. Of these 29 are Special Students, 34 are Scientific Students for whom the course is also prescribed by the authorities of the Lawrence Scientific School. Five are Graduate students who have been required by the Committee on Admission from other Colleges to take the course in view of their never having studied the language.

The course is taught in sections, the numbers in these being 25, 33, 32, 26. Each section has three recitations a week. The course is in charge of Mr. C. H. C. WRIGHT who is assisted by Mr. LA MESLÉE.

Course *1b* comprises 108 men. It is especially intended for students who desire to acquire a reading knowledge of French but who do not intend to pursue the study of the language further. It is prescribed for students in the Scientific School who take a second year of the language.

The course is taught in three sections numbering respectively 49, 36, 23 students. It is in charge of Mr. IRVING BABBIT, assisted by Mr. J. D. M. FORD. Each section recites three times a week.

Courses 1c and 1a are parallel courses and the work done is the same in both. In 1c, which is intended for men who have had no previous opportunity of hearing French spoken, English is used more largely at the beginning of the year, but by mid-year both sections are taught in French.

Course 1c is taught in one section by Mr. LA MESLÉE, who has 33 students. Course 1a, in charge of Professor DE SUMICHRAST, assisted by Mr. I. BABBITT, is divided into two sections containing respectively 47 and 28 students.

Course 2c is in charge of Dr. MARCOU, assisted by Mr. J. D. M. FORD. It numbers 140 men and is divided into four sections, comprising respectively 48, 48, 17, and 27 students. All these sections, as well as those in 1c and 1a, recite three times a week.

Course 2a is in charge of Mr. WRIGHT and is divided into three sections containing respectively 32, 39, 33 men. These sections also recite three times a week.

Courses 3, 4 and 5 are courses intended primarily for the study of French by the conversational method and the acquisition of the power of speaking and writing French is the main object of the students in the course.

These three courses are in the charge of Mr. BRUN, assisted in Course 3 by Mr. LA MESLÉE, and are divided into sections reciting twice a week.

Course 3 is divided into four sections of 22, 15, 16 and 14 men.

Course 4 is divided into three sections of 21, 22 and 22 men.

Course 5 is taught in one section of 15 men.

The second group of courses comprises 6c and 6, which are introductory to the detailed study of literature. The object of these two courses, of which 6c is taught in English and 6 in French, is to give the students a knowledge of the history of literature in France. Much reading and some composition are required of the men.

Course 6c being more in the nature of a recitation course cannot be taught satisfactorily if the number of students in any one section of it exceed 50. This being the first year in which it has been given, the number of men attending it has not rendered a second section necessary, but it is probable that the number of students taking it will grow rapidly and in that case a second, and possibly a third, section will have to be formed.

Course 6 is a lecture course and the number of students is no inconvenience.

Professor GRANDGENT gives 6c and Professor DE SUMICHRAST 6. Each course meets three times a week.

The numbers given in the various courses is that in attendance at mid-year. The numbers in every course were greater at the beginning of the year, but were reduced through various causes, such as difficulty of courses, excursions on account of neglect of work or withdrawal on account of conflicts or excessive number of courses carried.

In conclusion we would say that those professors whom we had the pleasure of meeting seemed most able and conscientious, and the instruction in every department very creditable. A small sum to increase the French library is very desirable because the books used are often expensive and the students cannot often afford to buy them. There is now a library but it is too small, and should contain duplicates of many of the works used in modern and mediaeval literature.

Respectfully submitted,

T. JEFFERSON COOLIDGE,
NATHAN APPLETON,
J. TEMPLEMAN COOLIDGE, JR.

LXIX.

REPORT OF THE COMMITTEE TO VISIT THE PEABODY MUSEUM OF ARCHAEOLOGY AND ETHNOLOGY.

First, as to Instruction: During the past year two courses have been given. Course 1 covers the general subject of Anthropology, including Somatology, Archaeology, Ethnology, and Ethnography. This course, while primarily for graduates, was open to undergraduates by permission. There were two graduates and one undergraduate in this course. In Course 20, which has been known as the Research Course for graduates, there were two graduates and two undergraduates by special permission, these two undergraduates being Seniors who had taken Course 1 in the preceding year.

Course 1 is open to undergraduates, and a special course is given in Physical Anthropology. Course 20*a* covers advanced work in American Archaeology and Ethnology, and is intended for graduates who have taken Course 1 or its equivalent. Course 20*b* is an advanced course given to special work in Somatology.

A regular instructor in Anthropology has been appointed, and he will have an assistant during the coming year.

Thus there has been a gradual but marked development in the instruction in this Division of the University since it was established in 1890. During all this time the expenses of instruction have been borne by the Museum and its friends, with the exception of one appropriation of \$250 received from the College during the past year. The Museum has also given up one of its halls for the purposes of instruction in this Division of the University. This hall has been provided with cases in which are kept the books constituting the students' reference library; also a collection of specimens which is being gradually formed for the special use of the students.

There are five important matters to which the Committee wish to call attention. *First*, the necessity of providing for the salary of an Assistant Curator, and also for the salary of assistants in the work of the Museum. *Second*, the completion of the building, in order that the large amount of material now in storage may be properly

arranged. *Third*, the establishment of a publication fund, that the many researches made under the auspices of the Museum may be published. *Fourth*, the securing means for the continuation of researches in the field. *Fifth*, the establishment of a fund, the income to be used for purposes of instruction.

For the Committee,

A. HEMENWAY.

May 25, 1897.

REPORT OF THE COMMITTEE TO VISIT THE JEFFERSON PHYSICAL LABORATORY AND DEPARTMENT OF PHYSICS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The undersigned members of the Committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the laboratory building on May 12, 1897, have the honor to report as follows: —

During the past year, the Director and his associates have made many original investigations, the published results of which have added much to the already world-wide reputation of the Jefferson Physical Laboratory as a centre of physical research. The most noteworthy of these investigations is that of the Director on "The energy conditions necessary to produce the Röntgen Rays." In connection with this investigation there has been used a storage battery of 10,000 cells, or five times the number of cells in any similar battery heretofore used. The Committee note with pleasure that this battery has been designed, constructed and installed by the laboratory staff, at a very moderate expense; and that it promises to yield results of great value in some of the most important branches of electrical science.

The routine work of laboratory and class room instruction has been kept to its usual high standard of efficiency.

During their inspection of the laboratory building and grounds, the Committee noted a "grand stand" of steel recently erected upon Holmes Field, within one hundred feet of the west wing; and they were informed by the Director that this mass of magnetic material has caused a most vexatious variable disturbance in magnetometer records of the "horizontal intensity" component of the earth's magnetism. Having regard to the fact that in the construction of the laboratory building a very considerable expenditure was made for the exclusion of magnetic material from the west wing, it seems almost incredible that the Administration of the University should permit its purpose to be frustrated by a structure which is a mere accessory to the game of base ball and other athletic sports.

From year to year, the Committee are impressed with the fact that

it is most desirable that the annual income of the Department of Physics should be large enough to permit such a staff organization as would allow the Director and several of his associates to devote themselves exclusively to the original investigations for which they are fitted by reason of their zeal and ability and their magnificent laboratory surroundings.

FRANCIS BLAKE,
T. JEFFERSON COOLIDGE,
ELIHU THOMPSON,
A. LAWRENCE ROTCH.

May 13, 1897.

NOTE. — It was stated to the Board by the President of the University that the steel stands were intended to be placed on the Soldiers Field, and that they were only placed temporarily on Holmes Field at the request of the Athletic Committee, and that the stands are to be removed.

REPORT OF THE COMMITTEE ON COMPOSITION AND RHETORIC.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

In dealing with the question of College English, or the advanced education in writing, a serious difficulty is met with at the outset, from the lack of an accepted basis of comparison between the present and the past. The believers in the ancient methods and their results are always numerous; nor is it easy to decide whether they are right or wrong in their assertions, so long as the evidence of results actually achieved through what are commonly described as “the good old ways,” and of the condition of affairs which really prevailed in past times, rests almost wholly on memory and tradition. How deceptive impressions so based are, is seen in the familiar instances of the weather and longevity. Exceptional storms or seasons, or cases of extreme old age, linger in the popular memory, and, in the absence of the records of a weather bureau or of statistics of vitality, are generalized into “old-fashioned winters” and a patriarchal tenure of life wholly unlike the present. So as respects the traditions of College English; individual instances in the past, which examination would probably show to be quite exceptional, have left an impression; and, in the absence of any record, or reliable basis of comparison, these exceptional cases are referred to in discussion as if they represented the average standard of their time.

In examining the written work now done, and the results attained, and pronouncing upon it and them, not only so far as the Academic Department of any University is concerned, but also in the institutions of Secondary Education, it would, therefore, be of the utmost assistance if visitor or instructor could turn from the papers of the present year to a collection of similar papers prepared under the methods in use in 1850, and again in 1800. Such a direct comparison, did the data exist, besides being of interest in itself, could hardly fail to set at rest several now much controverted questions.

Feeling at every step of their investigations the need of some such data of comparison the Committee on Composition and Rhetoric thought it would be wise in any event to make provision for the future in this respect. Accordingly, after consultation with the instructors of the Department, the following subject for a written

composition was prepared, and given out to all the students in the several English courses. The preparation of the paper was necessarily optional with the students, as it could not be treated as a regular exercise, nor count in the prescribed college work. In calling for the paper, the instructors explained the object for which it was desired, and the students understood that they were to prepare it at such times and with such care as they saw fit.

The subject was as follows :—“Describe the training you received, or the experience you may have had, in writing English before entering College, giving the names of the schools in which, or the instructors from whom, you received it; and then, speaking in the light of your subsequent work and experience in College, point out wherein your preparatory training now seems to you to have been good and sufficient, and wherein it seems to have been defective and to admit of improvement.”

This subject was given out in the latter part of November, 1896; and the papers upon it were handed in during December. They were, from the College proper, 1170 in number, the following table showing the courses, the full number of students in each course, and the number of those who actually filed papers :—

Name of Course.	Number of Students in Course.	Number who wrote.
English <i>A</i>	562	467
English <i>B</i>	91	64
English 22	312	278
English <i>C</i>	450	163
English 5	16	15
English 12	90	71
English 31	130	112
Total	1651	1170

Sixty-eight (68) students of the Lawrence Scientific School, and seventy (70) of Radcliffe College also handed in papers; making the aggregate number 1308. In the College proper, papers were received from 70 per cent. of the students in the several courses. All of the papers were, when received, at once packed up and forwarded to the Committee without examination, or with only a very cursory examination, on the part of the instructors.

Before considering these papers as a whole, or attempting to draw any general conclusions from them as a body of evidence, it is necessary as matter of record; and for the information of those unacquainted with the Harvard College system now in use, to explain briefly the scope of each course, and to summarize the papers filed by the students taking it.

COURSE A.

This course is prescribed for Freshmen, and for first-year students in the Lawrence Scientific School. Being an elementary course, it may be, and not infrequently is, anticipated by the more intelligent students or those from the better preparatory schools. Papers were handed in by eighty-three (83) per cent. of the total number of those taking the course. These papers may, therefore, as a whole be taken as a sufficient representation of it; though it would not be unfair to assume that the seventeen (17) per cent. who failed to hand in statements were probably not among the best equipped. Taking the students who enter college annually as a whole, it might, therefore, be not unreasonable to consider those in the course thus unrepresented by papers as an offset to those who had anticipated the course. The papers filed would in this way constitute a fair average Freshman showing.

The most noticeable feature in these papers, taken as a whole, is their extreme crudeness both of thought and execution. Indeed, the first impression derived from a cursory examination of the two large volumes (I and II) of the originals would probably be one of surprise that such a degree of immaturity should exist in a body of young men averaging nineteen years of age, coming from the best preparatory schools in America, and belonging to the most well-to-do and highly educated families. Some 60 out of the 467 papers showed clearly that the writers, from deficiency in purely elementary training, were not prepared to go on profitably in a college course. They might be able to read; they certainly could not write. The remainder were, so far as the faculty of written expression was concerned, fitted to pursue a college course advantageously; but, as a rule, their papers revealed other defects in the systems in use in the schools from which they came, which will be hereafter more particularly referred to.

COURSE B.

This course is prescribed for Sophomores who, having passed in Course A, take neither Course 31 nor Course 22. It is open to those students only who have passed in Course A. Courses B, 31 and 22 are on the same footing, but those take B who do not care to follow English composition or wish to do no more in it than is prescribed.

Of the 91 students taking this course, 64, or 70 per cent. of the whole, a fairly representative number handed in papers. These papers show in a marked way the effect on the writers of the work done in Course A, though the deficiency in earlier elementary training is still apparent in the unduly numerous examples of bad penmanship and incorrect

spelling. The average attained is about that which under other and more intelligent systems might reasonably be looked for from scholars of eighteen years. In other respects the papers in this course (Vol. III) afford merely cumulative evidence as to the preparatory school methods indicated by the papers in Course *A*.

COURSE *C*.

This Course is prescribed for Juniors who, having passed in Courses *B*, 31 or 22, do not take Course 30. It is open to those students only who have passed in Course *B*, 31 or 22.

Of the students taking this course, practically one for the Junior year, 163 out of a total number of 450 filed papers, or only 36 per cent. of the whole. Not improbably this deficiency was in large degree due to the fact that a subject almost exactly similar had already been assigned for a paper to be prepared in the regular course; and, naturally, a large proportion of the students did not care to prepare two papers at the same time on one subject. Meanwhile the papers filed (Vol. VII), while, perhaps, not to be accepted as a fair example of the whole, were most noticeable for their improvement over those of the earlier courses, and, indeed, for their general intrinsic excellence. Not over one in twenty certainly, or less than five (5) per cent. of the whole, were open to criticism on grounds of bad penmanship, defective punctuation, or lack of good grammatical expression. The average age of the writers was about 21 years, and the work is satisfactory as indicating a sufficient proficiency in written English for every practical purpose in life. The papers speak for themselves, and reflect credit on the excellent work done in the English department of the College. Moreover many of them are highly suggestive, coming as they do from young men of more mature mind and larger experience. The writers almost uniformly express a decided judgment that the instruction given in the preparatory schools in written English is inadequate, and that Course *A* belongs properly to the Secondary Education. It may indeed be said that not one of these papers which shows any degree of capacity in the writer, fails to express this opinion.

These papers also reveal in a striking, because almost always unconscious, way, what has heretofore been the great defect in the methods of instruction in written English in vogue in the common preparatory schools. It has been taught almost wholly objectively, or as an end; almost never incidentally, and as a means. This will be referred to more fully later on in this report, and is merely alluded to now in connection with these papers from Course *C*. In the great majority of the preparatory schools, English is still taught,

it would seem, not as a mother tongue, but as a foreign literature. The reason is obvious. Formerly English was not taught in these schools at all. It was supposed to be picked up incidentally, as it were, and by the wayside, in pursuing the beaten path of classical drill. Then it was by degrees introduced as a new college requirement; and, almost as a matter of course, the masters, following the instincts of analogy, taught the new language required as they were in the custom of teaching the old, — English was taught not incidentally and in connection with other studies, but independently, and as Latin and Greek were taught, through the analytical reading, or perhaps rather the spelling out, of writings of certain specified authors, and by exercises in so-called “composition,” at stated times. The results of this method are pointed out in the papers of Course *C*, and can be studied in those of Course *A*.

COURSES 22 AND 31.

These two courses should properly be considered together, as Course 31 is practically but the second division of Course 22.

Course 22 is counted as the equivalent of Course *B*, but as an elective it is open only to those who in Course *A* have attained the Grade *C*; while Course 31 is open to all who, having passed Course *A* with any sufficient grade, prefer an elective to Course *B*. Courses 22 and 31, while in some respects equivalent to Course *B*, are intermediate between Courses *A* and *C* and are to a large extent Sophomore courses.

From Course 22, ninety (90) per cent. of the students handed in papers, and eighty-six (86) per cent. from Course 31. They may probably be taken as fairly representative. Of these papers about ten (10) per cent. in Course 22, and fifteen (15) per cent. in Course 31 are below the proper standard both in thought and in mechanical execution. They show that in these respects, and to this degree, the college instruction had not yet made good the deficiency in the elementary drill in the preparatory schools. If examples of slovenly school-boy scrawls, which would disqualify the writer for employment in any counting-house or office, were needed, they could easily be furnished in fac-simile from the papers on file (Vols. IV, V, VI) in these two courses.

Certain of these papers are suggestive in one important respect. They were written by graduates of Normal Schools. Teachers from those schools should appreciate the necessity of early training in written English, for it is their especial mission to impart it to others at the most impressionable period of life. They should, therefore, in their work give evidence of severe, mechanical, ele-

mentary drill, received in the Normal Schools. They ought themselves to be writing-masters. The indications are, however, that the Normal school standard is in this respect unduly low, and that our teachers need themselves to be taught. (Appendix Nos. 1 and 2.)

COURSE 12.

This Course is open to those only who have attained Grade *C* in Course *B*, 22 or 31, already referred to. Those composing it are chiefly Juniors or Seniors, though among them are some Sophomores and a few students from the Lawrence Scientific School, Special Students and Resident Graduates. Of the 90 taking the Course, 71, or eighty (80) per cent. submitted papers (Vol. VIII).

The papers from Course 12, while noticeably better and, in all mechanical respects, more workmanlike than the papers from the earlier courses, are especially suggestive as coming from scholars who had left the preparatory schools several years ago, and before the effects of the recent agitation on the subject of written English had made themselves felt to the extent they since have. In these papers, therefore, the old system is described in a number of schools which have since introduced improved methods. The several steps in the process of change can thus be studied by comparing the statements of students in this course with the statements made by students from the same schools included in the earlier courses. In this respect many of these papers are of value.

COURSE 5.

This is an advanced course. Fifteen out of the sixteen students taking it handed in papers, and they are of interest, first, because of the conclusions and suggestions to be found in them, and, secondly, because they show the degree of workmanlike capacity acquired by the most mature and highly trained of all those among the Harvard students taking written English instruction. As a rule these papers bear closely on the questions fundamental to this discussion.

LAWRENCE SCIENTIFIC SCHOOL.

The papers in Course *BC*, sixty-eight (68) in number, were handed in later than the others, and are bound by themselves in Vol. IX. This course corresponds in part to Course *B* and in part to Course *C*, and is prescribed for students in the Lawrence Scientific School. It is open to those only who have passed in Course *A*.

The papers filed in this course were noticeably inferior in nearly all respects, — thought, neatness of execution, spelling, penmanship

and observation, — to the papers in the other courses. They contributed nothing to the general result, and no extracts from them are included in the Appendix. Taken as a whole they were the least creditable, as well as least suggestive, part of the exhibit.

RADCLIFFE COLLEGE.

This cannot be said of the seventy (70) papers from the Radcliffe College students (female) which are included in the collection. (Vol. VIII.) These have an interest and value of their own, and will repay examination. Nearly all the English courses are represented in them. In mechanical execution, — neatness, penmanship, punctuation and orthography, — they show a marked superiority in standard over the papers from the courses of the College proper, — perhaps three (3) only of the whole failing to reach the proper level. In their contents also they reveal unmistakably a greater degree of conscientious, painstaking effort, — the desire to perform faithfully and well the allotted task. On the other hand, in thought and in form, they are less robust and less self-assertive. A few are sprightly; none of them indicate any especial capacity for observing, or attempt, in pointing out defects and difficulties, anything which might be termed a thoughtful solution of them.

The 1308 papers handed in as above from the students in the seven specified Harvard courses, the Lawrence Scientific School, and from Radcliffe, have all been read by the Committee, and upon them the present report is based. They have also been carefully gone over and indexed under the heads of the writers' names, and the names of the schools mentioned. The whole collection, together with the index, has then been bound in nine (9) large volumes, which have been deposited in the College Library for the information of all who may now be interested in the subject of this report, and also as a starting point, as well as basis of future comparison.

As a body of evidence bearing on the present condition of the Secondary Education, and the methods of instruction in written English there in use, these papers have seemed to the Committee both of direct and indirect value. Their direct value is found in the statements made in them concerning the systems now or recently pursued in some four hundred and seventy-five (475) different schools in all parts of the United States, together with a few in Europe. These statements are entitled to various degrees of weight, depending on the intelligence, the correctness of recollection, and the power of observation of those making them; and these qualities

of the writers, it is proper to say, vary in such a marked degree that it is at times difficult to reconcile the accounts of a school given by several scholars coming from that school at the same time. In such cases, however, the intrinsic evidence in certain papers of care, accuracy and intelligent insight almost invariably suffice to enable a reader to select such as most nearly present the real state of facts.

In this connection reference may also perhaps best be made to another point. It has sometimes been urged that putting this evidence of past scholars as to the schools in which they had been taught on the shelves of a library for public inspection is open to grave criticism, inasmuch as opportunity and even temptation is thus held out for false and possibly malicious *ex parte* statements, through which, so to speak, old scores might be wiped out, often in an unjustifiable way; while the master, from the very nature of the case, is cut off from any defence either of his system of instruction, or of himself. He might thus find himself held suddenly up to lasting ridicule or opprobrium, without remedy, or even the possibility of answer. This objection the Committee wishes once and for all, to say has been kept steadily in mind. The papers have been carefully read with a view to excluding any statements which were unfair, harsh or indicative of malice. They proved, however, noticeably free from everything of the sort. In most cases both schools and teachers are spoken of in a kindly, and often even an affectionate, tone; and, while, as would naturally be the case, the systems in use are frequently criticized, and, in the light of fresh college experience, pronounced wrong or inadequate, in no single instance was this done in an unworthy spirit or abusive tone. Indeed, it has seemed to the Committee that the masters of the preparatory schools named, — and there are few of the better equipped schools of the country which are not named, — could hardly pass a day more profitably than by turning in these volumes to the papers now written by their former pupils, and reading there fresh criticisms of themselves and their methods. They would find much that is dull, commonplace, unintelligent and unappreciative; much, also, the reverse of this: but they would see themselves and their methods as, in the light of subsequent experience, others see them, and might derive therefrom profit always and encouragement sometimes.

But, as a body of evidence on the present condition of the Secondary Education as respects instruction in written English, the chief value of these papers lies in the indirect, or unconscious light they throw upon a curiously heterogeneous system of almost undirected, natural growth. In this respect they are not open to question.

Their mechanical execution, their admissions and their omissions, their forms of expression, and efforts at observation and criticism speak for themselves. They reflect, and reflect accurately, because unconsciously, a transitional phase in education. Their future value from this point of view can hardly fail to be considerable, and ever increasing.

An examination of them reveals also the reason of the break, or perhaps lack of perfect connection, which at present seems to exist between the Preparatory Schools and the College; it also reveals the tendency of development which has already in great degree brought the two into a more perfect connection; and, finally, it indicates in a manner not easily to be mistaken the process now going on, and through which the desired result will, in the opinion of the Committee, at no remote day be brought about. These several deductions it is proposed to develop in the present report. In so doing use will be freely made of the various papers as evidence, or for purposes of illustration. No fac-similes seem to be required. A sufficiency of such have been furnished in the previous reports of the Committee; and, though many more could be furnished from the body of papers now under consideration, were more needed or called for, it seems, for present purposes, merely necessary to quote in print from certain of them. These papers, whether reproduced in whole or in part, have in every case been selected because they contain some peculiarly clear and simple statement; or because they vividly illustrate some phase of development or point in controversy; or, finally, because they indicate on the part of the writer a grasp of the subject, or a special literary aptitude. For, while the mass of the papers are, as was of course to be expected, commonplace and monotonous, a few of them contain matter bright, observant, reflective, and at times humorous; and from such the Committee has endeavored to make selection.

In the first place, the Committee desires to premise that, taken as a whole, the conclusions and inferences to be drawn from these papers are distinctly and unmistakably encouraging. That much room still exists for improvement and an elevation of standard, is apparent, when it is said that the papers from English *A* show conclusively that about 25 per cent. of the students now admitted to Harvard are unable to write their mother tongue with the ease and freedom absolutely necessary to enable them to proceed advantageously in any college course. In other words, one in every four of the papers filed in English *A* is in a mechanical way so badly done, — so ill-written,

incorrectly spelled, ungrammatically expressed, and generally unworkmanlike, — that it clearly shows the writer out of place in college, and material proper for the Grammar even, rather than for the Secondary, school. This is made apparent even by a cursory examination. And yet, none the less, these very papers have their value, inasmuch as they reveal through the statements they contain wherein is to be found the root of the trouble; and, moreover, they further indicate the steps now being taken to remove that trouble. In this connection it is difficult to over-estimate the importance of the work done by the English Department of the College. It has been described in the document recently published entitled “Twenty Years of School and College English;” * and it affords the Committee no little satisfaction to say that the papers under consideration furnish evidence, both abundant and incontrovertible, of the far-reaching and beneficent influence of the policy and efforts therein referred to.

To appreciate, however, the necessity as well as the nature and scope of this recent work of the English Department, it is necessary to understand its connection with what has gone before, — the situation must be considered from the historical point of view; for, only when so considered, can the process of gradual and necessary development which has been going on for a score of years, and will probably continue for an equal time to come, be intelligently comprehended. That it should be intelligently comprehended, especially by those engaged in the work of secondary instruction is most desirable; for it seems to be altogether too frequently supposed that the increased English requirements for college admission have no other object than the development of a new and somewhat superfluous branch of general education, in no way necessarily connected with the other and traditional branches; and, moreover, one which is handled in a somewhat vexatious and incomprehensible fashion. Yet that this has not really been the case becomes apparent the moment the situation is looked at in its antecedent connection.

Speaking generally, and in the absence of any accepted basis of evidence, it may be said that forty years ago Harvard College, and the schools which prepared for admission to it, were in close touch with each other; or, in other words, the systems of instruction pursued in the two were much the same. In each, it was in largest part oral; that is, in the college as in the school, the scholar prepared his

* Four papers prepared by Professors Hill and Briggs and Mr. Hurlbut between 1879 and 1892, and republished with an “Introductory Note” and Appendix among the Harvard University Publications, in 1896. An acquaintance with this document is necessary to any correct understanding of the present phase of the “College English” discussion.

lesson, and, when called upon, stood up in class and recited to the instructor, answering questions and otherwise indicating orally his familiarity with the subject. Themes and forensics were prepared and handed in at certain stages of the college course and at stated intervals, — once a month or twice a term, as the case might be. The college classes, also, were then comparatively small, and the work imposed on the instructors correspondingly light, and limited to the recitation room.

About the year 1870 a change began to make itself felt, first in numbers and then in the methods of the college, which gradually brought about what amounted to a revolution. The classes increased in size nearly fourfold, so as to become wholly unmanageable for oral recitation, and the elective system was greatly enlarged; step by step, the oral method of instruction was then abandoned, and a system of lectures, with periodic written examinations, took its place; so that at last the whole college work was practically done in writing. The need of facility in written expression was, of course, correspondingly increased. Without the power of writing his mother tongue readily and legibly a college student was not equipped for the work he had to do, inasmuch as he did not have at his control an implement essential in doing that work. Writing English had thus become a mere incident, and no longer an end, in the student's college processes. This was so from the day he presented himself for the entrance examination forward to his graduation; and, probably, at no time in his whole course did he feel the need of the tool so acutely as on the day when he sat down, a candidate for admission, with the dreaded examination papers before him.

Meanwhile, naturally enough, no similar or corresponding change took place in the system of instruction in vogue in the preparatory schools. They went on in the traditional oral methods. The scholars continued to stand up in class as their fathers had done before them, and what written work they did was almost never incidental, but by and for itself. Confined to stated exercises in penmanship or, so called, composition, at given intervals of time, it was not sufficient in amount to give the scholar a sense of familiarity or ease. It was as if a boy had been taught to skate, to ride a bicycle or to play ball, through oral and theoretical instruction in the principles of lines, curves and balancing, with one hour of practice once a month, or even twice in three weeks. Of course, through such a method of instruction, without daily practice, he would never learn to play ball or skate familiarly or well.

Thus the schools by degrees ceased to prepare for the college. Scholars accustomed to oral work presented themselves for a written

examination, with practical results which have been set forth in the facsimiles submitted in previous reports of this Committee. The College Faculty, perplexed at the unprepared condition of those they were practically compelled to admit, went on raising the requirements in written English, while the schools still continued their English instruction in the old-fashioned objective way, — more “themes,” “compositions,” “essays,” were exacted, but the oral class instruction was adhered to. The friction, for such it amounted to, between the school and the college thus steadily increased.

The Freshman course known as English *A* was accordingly introduced, representing what might be called the intermediate stage, — that between school and college. The scholar trained in the oral system, with English simply used objectively, or as an exercise by itself and for itself, was compelled to take this course in order that he might learn to use English incidentally, or as a necessary medium in other courses. The papers forwarded to the Committee from the students taking this course, and now placed on the shelves of the Library, were not only in number more than those from any other course, constituting indeed 40 per cent. of all sent in, but, taken as a whole, they were the most interesting and suggestive; though to a very large extent unconsciously so.

The problem presented is obvious to any one who will take the trouble to read these papers in English *A*; while the difficulty in the way of its solution at once suggests itself. At the same time, in theory at least, the way to overcome that difficulty is not far to seek. The problem is to increase to a very great extent the work in written English now done in the preparatory schools, and at the same time largely to change its character. More practice, more daily drill and severe discipline are required. The difficulty is to find time for this practice, drill and discipline. The contention is that the requirements already made occupy all the time available; and the daily theme or essay or composition, however desirable, can only be got from the scholar by sacrificing some other, and more necessary, study. The solution seems to be simple; — English should be taught in the preparatory schools not, as now, altogether objectively, but incidentally, and in connection with other studies, — mathematics, geography, history and, especially, foreign languages and the Classics.

Take the Classics as an example of what is proposed. The theory upon which the study of the Classics, both Greek and Latin, has always been, and still is, insisted upon as the best introduction to a college course, is that in no other way can a knowledge of construction, grammar and vocabulary be so well acquired. It is the most thorough possible grounding in written expression. However true

this may be in theory, it is in practice, under the oral methods now pursued, to a very large extent fallacious. The two things are taught separately, and, as the previous reports of the Committee demonstrate, the candidates for admission to Harvard can neither write English, nor translate into English the classic authors. Yet few who look into the subject carefully will, it is probable, feel disposed to deny that the rendering of passages from the classic authors into written English is on the whole the most severe discipline possible both in the study of Greek and Latin, and in writing English. The candidate for admission to college who is able to meet that test, need feel no apprehension as respects the other branches of English. Here then is a place where time can be saved, and the necessary discipline given in clearly written English. The present slovenly, inexact oral method of rendering the Classics "into that lazy, mongrel dialect, 'Translation English,' " can, and, as the examination papers show, should give way, at least in part, to daily written work.

The practical objection made to this method of instruction is obvious. It is supposed to involve great additional outside labor on the part of the masters of the preparatory schools. The written translations, it is assumed, must be examined, out of school hours, by the instructors, corrected and returned to the scholars. If this were indeed the case the objection to the method proposed would be final. School-masters are mortal; and, being mortal, they must have rest from their labors. They cannot work out of hours, as well as in hours. But is this process necessary? It would not so seem. The course here suggested is not proposed as a substitute for the present English and classical instruction, but as incidental to it. Every other day, for instance, the recitation from the Classics would be, not oral, but, as in the college, written. The scholars when they came into the class, would appear with a written translation in their hands. Instead then of rendering the lesson of the day orally, as now, such of them as were called on would read from the papers they had prepared. These papers the instructor could take, in the class, glance over them, and satisfy himself as to the execution; the papers of such as were not called upon at that recitation would then be handed to the master for such further examination as he might wish to give to them, or consigned directly to the waste-paper basket,—in either case the scholars would have had their drill in preparing the lesson, and their turn to be called upon would come some other day. The whole class is not necessarily called on for oral recitation now; it would not be called on for written recitation then. The severe, constant, daily discipline and practice would, all the same, have been undergone; and the master would have disposed of his work during school-hours.

The system would, too, admit of alternation, and a consequent variety of exercise, which would afford a much needed relief to both instructor and scholar, by breaking up that tedious monotony of method, the bane of the average school. The written exercise in the Classics of one day, could the next be followed by one in mathematics, or history, or French, or German, or geography. But every day some recitation, now conducted orally, should be conducted in writing. In this way the scholars would be accustomed before entering college to use written English as a means, and not merely as an end. They would then write as they now speak;—in other words they would in their preparatory training be taught to talk with the pen.

It is, indeed, not unsafe to say that the schools and the college will not be brought into close sympathy and complete touch until this incidental method is introduced into the Secondary Education. But, on the other hand, there should be no misunderstanding as to the extent of the change in method proposed, or the way in which it should be introduced. The incidental method of instruction is not intended to supplant either the old oral method, or the present training in English composition, but merely to take their place to a limited but an ever increasing extent. The oral method has its distinct educational value, for the ability to express oneself in speech is of even more importance than the ability to express oneself on paper; and, in this respect, the present college system may, perhaps, be open to criticism. But, this apart, as between the preparatory schools and the college, the two methods should not be distinct; they should, on the contrary, insensibly merge into each other. It might be well for the college to recur in some degree to oral methods; but, whether it does or does not, it is obvious that during the last two years of every preparatory course it should be the practice to have more and more of each day's work done in writing. But again this incidental class-writing must not be made a substitute for the formal written work now done. It must be in addition thereto; and regular written compositions, periodically called for, should, as now, be subjected to severe, out-of-school, correction, and equally severe, in-school, revision.

Such is the problem; and such the theoretical solution of it. As is usual, however, the solution proposed fails to commend itself to the judgment of a large portion, perhaps much the larger portion, of those engaged in the work of secondary education. It is, when not characterized as absurd, pronounced not practical as an every day, working, school-system. Wedded to the accustomed methods and the ancient ways, neither teacher nor pupil take kindly and at once

to innovations, and especially to innovations which involve more severe mental effort and more exacting drill,—in a word, more drudgery. There is, among the extracts from the papers submitted in the Appendix to this report one (No. 90) both interesting and suggestive on this point, the introduction of the method proposed having led to “a storm of angry criticism”; yet, afterwards, its efficiency was recognized. As a system it is, perhaps, open to the objection that it involves drudgery; indeed, effective systems of discipline, intellectual or physical, educational or military, are usually open to that objection. The traditional oral method in school-teaching may be slipshod and slovenly; undeniably—for the college papers prove it—it does lead directly “into that lazy, mongrel dialect ‘Translation English’ ” already referred to; but, none the less, it has the advantage of being easy. The written method, on the contrary, is crucial. It brings ignorance and carelessness at once to the surface, and compels their correction. This commends itself neither to the average teacher nor to the average scholar; and they become at once fertile in objections.

It is in their bearing on this phase of the problem that the papers herewith submitted are most valuable. They constitute in themselves, as the extracts from them show, not only an unconscious debate, but a debate that is, on the issue presented, final and conclusive. There is in them a general and decisive agreement that English *A* as now conducted is not a proper college course, but should be relegated to the preparatory schools. On this point there is practically no division of opinion. But here the agreement ceases, and the writers divide themselves into two classes. The first, and by far the larger class, representing, indeed, the great bulk of the schools, raise the objection of time; they describe how the methods in use in the schools from which they came,—the occasional theme, composition or essay,—the reading and analysis of authors and the consequent discussions of “style,”—consumed the school hours. They then declare that the daily theme, however desirable, could not have been introduced without a displacement of some other indispensable study. (Appendix, Nos. 3–68.) This conclusion, and the thoroughly practical considerations on which it is based, could not well be expressed more concisely than in the following extract, typical of many, from one of the papers handed in to the Committee:—

“I believe that I received far too little training in writing English, for my own good; but I feel sure that I could not have given up a part of any other subject to make more time for writing English, without greatly lessening my chances of passing all my examinations for Harvard College.”

Such is the contention on one side. On the other side a much smaller body of writers describe a different system as already prevailing in the schools from which they came,—the incidental system,—the exact system which suggests itself in theory, and which is so frequently, and somewhat contemptuously, dismissed, as being excellent in theory, but in working not practical. Though all indications of the sources from which they came are for obvious reasons suppressed in the papers and extracts from papers herewith submitted as bearing on this subject, it is noticeable also that the schools which are described as rapidly drifting into the incidental methods and accommodating themselves to the new conditions, are almost invariably those generally recognized as the more intelligent and progressive, and those, also, the students from which present the most creditable and observant papers. From these papers (Appendix, Nos. 69–119) it will be seen that a number of schools have brought themselves already into touch and sympathy with the college, assuming English *A* as a part of the preparatory course, and thus sending up their graduates equipped at the outset to go forward in advanced work.

For this reason the Committee has referred to the discussion to be found in these papers as final on the point at issue. It is difficult to persist in declaring a system of training absurd, or even not practical, which is found to be both in actual use, and in a use which is both increasing and successful ; and that, too, in the most approved schools. Whatever may be said to the contrary, its general adoption becomes then a question only of time. The evidence contained in the body of papers and extracts herewith submitted is in the judgment of the Committee so conclusive on this point, as to obviate the necessity of further discussion ; and for this reason, as a mere unsupported assertion in regard to its existence and character would not probably be accepted as sufficient, it has seemed to the Committee expedient to spread that evidence upon the record to an extent which, under other circumstances, might be thought unnecessary. Moreover, the debate itself, conducted as it was by those looking at the issue from no mere abstract or theoretical point of view but in the light of fresh personal experience, is in a marked degree graphic and instructive. It is not the evidence of one witness or of several, speaking of a local and exceptional experiment and its results, nor is it testimony slowly elicited in response to leading interrogatories. On the contrary, as will be seen from an examination of these extracts, at once many and copious, they are the spontaneous expression of a large number of students, fresh from many schools, bearing, always directly, often unconsciously, on a phase of educational development. As such they, in the judgment of the Committee, constitute the one portion of this report likely to prove of permanent value. Hence the space allotted to them.

The Committee have thus endeavored to set forth (1) the historical origin of the unsatisfactory state of affairs as respects "College English," now existing, and of which so much has of late been heard; (2) the steps which have, more or less intelligently, been taken in consequence thereof; (3) the gradual remedial process now going on: while the large body of papers placed in the College Library in connection with this report throw, as the Committee has already said, a light both interesting and valuable on the different phases and the ultimate tendency of that process. As regards the last, also, the rate of progress indicated in these papers, while seeming slow to some, can hardly be considered otherwise than satisfactory, considering the size and wholly unorganized character of the body to be influenced,—hundreds of schools, public and private, general and specialized, planted amid surroundings which vary greatly in character, preparing thousands annually for admission into scores of institutions of the advanced education. A few of the numerous passages to be found in the papers submitted, bearing on the great number and varied character of the schools, have been selected, and can be found in the Appendix (Nos. 146–158). They will suffice for purpose of illustration. But where a body of institutions so heterogeneous, so widely scattered, and of such varied environment are to be influenced and brought into line, progress must necessarily be slow, and cannot but be attended with friction and loss of power, inevitable, but not the less on that account to be regretted.

But, while all this is true, it should also be added that the lamentable waste of time and expenditure of misdirected effort revealed throughout these papers, is largely due to a misunderstanding among those engaged in the work of the proper functions or province, as respects English education, of the college and the secondary schools. The two, it is apparent, have not yet assumed their recognized relations to each other; and, in consequence, while the college is today forced to do much work of a purely elementary character which properly should be done in the secondary schools, those schools on the other hand are in many cases endeavoring to do the work which properly belongs to the college.

The course known as English *A* is the debatable ground, and to that course it is always necessary to recur in carrying on the discussion. The scope and character of Course *A* have already been referred to. The instruction given in it is purely elementary,—teaching boys the rudiments of English composition; to which, as the evidence herewith put on record altogether too clearly proves, penmanship ought by good rights to be added: for, if the University undertakes to do Grammar school work, it should at least do it thoroughly, and

not, as now, in a half-hearted way. Accordingly, if it means to continue what is known as "English A" as part of the college course, it should, under existing conditions of the primary and secondary education, proceed forthwith to create chairs of Chirography, Orthography, and Punctuation to supplement the existing chairs of Rhetoric and Belles-Lettres, and to relieve their now sadly overworked occupants. In other words the students when sent up for admission lack elementary training; and, in subsequently giving that training to them, the University has to do the work of both the Grammar and the Preparatory schools. In this respect, and it is a very important respect, the present requirements for college admission seem to the Committee decidedly too lax. They should be raised at least to the point of compelling candidates to prepare their examination papers neatly, legibly and with a certain amount of mechanical facility, including a decent regard for penmanship, grammar and spelling. As the papers herewith deposited in the Library conclusively prove, these are not now requirements for admission to Harvard.

On the other hand these papers show an equally strange confusion in the minds of a large proportion of the teachers concerning the province of the secondary schools in the matter of English composition. Because the college requirements call for a certain amount of written English, including papers in the nature of abstracts of a number of specified books, it seems to be altogether too frequently assumed that the institutions of secondary education are expected annually to send up for admission to college solid phalanxes of potential authors, essayists, and litterateurs. The evidence of this delusion is to be found almost everywhere in the nine volumes of papers under consideration, — evidence incontrovertible, because wholly unconscious, and some of it comical, did it not, from its revelation of misdirected effort and unintelligent zeal, verge on the pathetic.

Take, for example, the matter of reading standard authors. It is, of course, most desirable to set good literary models before children in the preparatory schools, and to familiarize them as early as possible with the names and works of the great English writers; and the college, therefore, very properly demands on the part of candidates for admission a certain familiarity with our better literature* and with the masters of what is known as "style." From the educational point of view, and as an element in learning how to write, the reading the

* The nomenclature is sometime a little startling, if it assumed to indicate familiarity with the works of great English writers; as, for instance, the following in one paper, "certain books, such as Scott's 'Old Immortality and Lady of the Lake,' and Longfellow's 'Evangeline,'"

works of these writers is just as important as, reverting to the comparison already used, it is for a boy eager to excel in skating, in playing base-ball, or in riding a bicycle to watch experts or professionals as they perform their feats upon the ice, in the rink, or on the ball-ground. Provided he is observing and interested, the boy, while thus looking on, learns to distinguish really good skating, good ball-playing, and skilful bicycling from the work of bunglers; and this helps him greatly in his own daily practice. It is well, however, that both instructor and scholar should realize that the mere reading of books, though good so far as it goes, will no more of itself make a writer than the looking at masterpieces will make an artist, or listening to music a composer.* There is no easy road, any more than there is a royal road, to excellence in any of these fields. In all of them, on the contrary, not excellence, but only proficiency, is the ordinary result of long-sustained, strenuous labor under careful instruction; and mere proficiency even will not come through parrot-like imitation.

The instructor, too, must not only appreciate this somewhat important fact, but he must have a clear understanding of his own part in the work. Unfortunately, as the evidence herewith submitted only too plainly shows, this is at present not always the case. The instructor, in altogether too many instances, does not know how to do his part in the work, and consequently the study of literary models as now carried on in our schools of secondary education not infrequently does more harm than good. Not only, as the papers show, is it marked by a pitiful waste of valuable time, but it leaves behind it a sense of weariness and disgust rather than mind hunger. For instance what possible benefit can immature boys derive from devoting a large portion of a whole school term to the analysis of a single oration of Webster's by paragraphs, sentences and clauses; or what but a sense of repulsion can result, if children, needing assimilative nutriment and craving the stimulant of interest, are daily

* "I do not wish to say a word against the particular school which I attended, nor against the schools of the West. From all I can hear this lamentable state of things exists in nearly all the high schools of our country, East or West. This system of teaching English, — of pounding very abstract principles into very concrete heads is one of the subjects of my complaint. A person may know every note of a piece of music, he may know and feel every mark of expression, on the mental instrument he may execute the composition with wonderful skill, — but, seated before the real piano, his untrained fingers will wander helpless in the confusion of keys. A person may have read every book written on the life, language and customs of Homer and his time, but the only way to know Homer is to read Homer himself. So it is I think the only way to learn to write English, is to practice writing English." Extract from an English *A* paper, by a student from Montana.

dosed with long and to them nauseous, because unintelligible, drafts from Emerson, Ruskin, Cardinal Manning, Matthew Arnold and Walter Pater? Upon this point the papers which accompany the present report are curiously suggestive.

Indeed, such educational performances as are again and again described in them with perfect simplicity and obvious truthfulness would be reckoned impossible in anything but what is known as "English composition," — something obviously supposed to be quite other than plain written English. "Composition," it is apparent, is assumed to be high art in writing, — what is somewhat ambitiously known as Rhetoric and Belles-Lettres. Accordingly, educational eccentricities are sometimes revealed in the preparatory schools which would scarcely be thought credible but for the evidence now placed on record. For instance, taking once more other branches of development, for purpose of illustration, the great masters of written expression are no less rare than the great masters of painting or of music, — a Milton, an Addison, a Burke or an Emerson would rank in the individuality or choiceness of his work with a Rembrandt, a Titian or a Millet in painting, or a Mozart, a Beethoven or a Wagner in music. A school-master, whose business it was to instruct children of from 15 to 18 years of age in the elements of drawing, painting or music, with a view to passing an examination for admittance into some Academy, would naturally devote his time and that of his classes, to a severe discipline in the first rudiments of music and draughtsmanship, — the practice of the scales and the drawing of straight lines, the flexibility of the muscles, the facility of the fingers and the correctness of ear and eye. But what would be thought of a master who, instead of this, exhibited a copy, — a good copy, perhaps, — of a portrait by Titian or Velasquez, Rubens or Reynolds, or played to his pupils, or took them to hear, a composition of Wagner, Mozart or Beethoven, — analyzing according to his lights and after his own fashion the masterpieces under consideration, pointing out differences of method and manner, and then, after thus directing the budding intelligence of those who did not yet know really how to draw a line or strike a note, and who were not mature enough to have any correct appreciation of what they had seen or heard, should tell them to sit down at their desks and paint a portrait after the manner first of Rembrandt and then of Velasquez, or compose a symphony in the style of Mozart as distinguished from that of Beethoven? Yet, incredible as it seems, this is now done in some of the preparatory schools.

The papers, especially those of English A, afford many examples and instances, a few of which are reproduced and herewith submitted

in evidence of the defects and absurdities of instruction just referred to. (Appendix, Nos. 120-142.) Indeed, as a whole, these 1300 papers may be said to be full of loose, meaningless talk, — perhaps cant would not be too strong a descriptive word, — about “style,” “mass,” “individuality,” “rhetoric,” “originality,” “expression,” “technique,” “barbarisms,” “solecisms,” etc., etc., indicating an utter lack on the part of those who had instructed the writers of the proper limits of the work assigned them to do; — that is, of the true province of the schools of secondary education as respects written English as opposed to the province of the college.* No satisfactory result can be hoped for until these limits are not only defined, but generally understood and accepted.

The province of the secondary education is, then, not to train up and develop whole classes of potential Miltons, Defoes, Addisons, Macaulays and Hawthornes, — it has, on the contrary nothing whatever to do with such processes, and whatever mistakenly, or from excess of zeal, it may do in that direction will probably be ill done, and have of necessity, with much vexation of spirit, to be wholly undone and painfully redone. (Appendix Nos. 143-145.) It is the University, not the Preparatory School, which has to do with “style” and “individuality,” “Mass, Coherence and Form,” with, in a word, that much abused and misused branch of study known in educational parlance as “Rhetoric.” The province of the preparatory schools is to train the scholar, boy or girl, and train him or her thoroughly, in what can only be described as the elements and rudiments of written expression, — they should teach facile, clear penmanship, correct spelling, simple grammatical construction, and neat, workmanlike, mechanical execution. And this is no slight or simple task. It certainly, as these papers show, is not generally accomplished now. Nor will the desired result ever be brought about by occasional or spasmodic exercises of a half hour or one hour now and again, at intervals of three days, a week or a fortnight, throughout the school course, — it demands steady, daily drill, and drudgery of a kind most wearisome. Its purpose and aim are not ambitious, — its work is not inspiring; — no more ambitious and no

* “I think, too, that my style of writing was never paid enough attention to. One teacher told us that, unless we were geniuses, we probably had no style of our own. I was no genius, but I had a style, and a very poor one it was. The form of my work was criticised, grammatical and rhetorical errors were pointed out, but no one was good enough to tell me to get back to simplicity and leave off trying to make an impression. That I have had to learn myself.” The foregoing extract from one of the papers submitted by the Radcliffe College students is, in several respects, suggestive. The writer was a graduate of a Massachusetts city High School and Normal School.

more inspiring than the similar elementary drill in the musical scales, or the mixing of colors and drawing of straight lines. Its end is to so train the child, muscularly and mentally, from its earliest years, that when it completes its school education he or she may be able on occasion to talk with the pen as well as with the tongue, — in other words to make a plain, clear, simple statement of any matter under consideration, neatly written, correctly spelled, grammatically expressed : — And this is English *A*.

The scholar, when this result is accomplished, and not before, is prepared for admission to college. The preparatory school has then, in so far, done its work, and done it well. It remains afterwards for the student, guided by his necessities or following his aptitudes, to decide what use he will make of his elementary training. In nineteen cases out of twenty, it will be found to suffice for his future needs. He has all the power and facility of written expression he requires to enable him, whether in college or in practical life, to do his work or accomplish his aims. He may feel no call, and have no wish, to become an essayist, an author, or a litterateur, — but in his business or vocation he can express himself indifferently with the tongue or with the pen. Fortunately our college classes are not wholly composed of would-be or even nascent Macaulays, Carlyles and Ruskins, Walter Paters or Stevensons; but when the one man in twenty presents himself, who, after full and sufficient drill and drudgery in the rudiments, elects to go forward to a more advanced literary education, it then becomes the province of the University to take him in hand, and afford him every facility for so doing.

Both the secondary and the advanced education will, in the judgment of the Committee, continue in the present transitional, and somewhat confused transitional, phase, until these distinct provinces are recognized, and each confines itself to, or is left free to fulfil, its proper functions. For a considerable time yet to come, it is to be feared, the preparatory schools will continue worse than wasting much valuable time, under the erroneous idea that through attempts, at once futile and ludicrous, to make crude boys bear a remote resemblance to certain great authors, they are merely meeting college requirements; on the other hand, they will also go on sending up a large proportion of those who annually present themselves for admission to the colleges untrained in the rudiments of written English, for the very obvious reason that those thus sent up have never been subjected to that monotonous daily practice without which ease in the use of the pen can no more be obtained than could excellence in foot-ball, rowing, or tennis. Meanwhile the college must continue to accept this unprepared material, and practically devote a

very considerable part of one of the four years of its course to teaching those who now should be students, but are in fact still school-boys, how to use the necessary tools. Having taught them this, it is next necessary to disabuse them of the notions about "style" and "rhetoric" which have been laboriously instilled into them.

The 1300 papers, part of this report, show clearly enough the degree of progress made up to the present time in this process of separation, — delimitation it perhaps might be called. That it has not been more rapid is greatly to be regretted; but, none the less, the indications are distinct that the system is steadily tending towards the desired result, and that its attainment is a mere question of years. In fact, as the body of evidence now placed on file shows, in this, as in all cases of radical change, a new generation of instructors had both to be brought up and allowed time in which to make their influence felt. The old generation, — the masters of the old school, — as their criticisms on the changes introduced into the system to which they were accustomed, clearly showed, could only in rare individual instances adapt themselves to the new order of things, or appreciate either its significance or its necessity. It has devolved on Harvard to lead in this great change, the far-reaching educational consequences of which cannot yet be measured. It is enough for the present to say that it manifestly aims at nothing less than elevating the study of English to the same plane of dignity which has for centuries been the peculiar attribute of the classic tongues.* Their exclusiveness in the domain of the advanced education is challenged; and a race of young instructors is now at work, and is going out from the University in yearly increasing numbers, whose influence has only begun to make itself felt, but will in the end be little less than revolutionary.

Under these circumstances, the Committee believes that the present report, with the documentary matter placed in the College Library in connection with it, will be the last of the series it has felt called upon to make. Those reports have been four in number and consecutive, in each case the evidence upon which the Committee based its conclusions being made part of the permanent record. As such this evidence will hereafter speak for itself, either in justi-

* "The Greeks would not have obtained so perfect a literary expression if they had devoted less attention to their own language than to Assyrian or Egyptian; but that is practically, in principle, what we are doing." Appendix, No. 61. Extract from a paper in Course 12.

fication of the conclusions drawn, or otherwise. A basis for future comparison is thus at least provided; and it will remain for the Committee which in 1920, or thereabouts, may then have imposed upon it the duty of examining into the Department of English Composition and Rhetoric to report, after comparing the results at that time attained with those now placed on record, whether the present Committee is correct in its judgment as respects the tendency and force of the influences now at work. To the Committee the trend of development as seen in the papers prepared for it seems so pronounced and so strong, that the attainment of the end it has all along had in view may be assumed. Correct, elementary, written English will in the near future be scientifically taught as part of the primary and secondary education. The complete relegation of the course known as English A from the college to the preparatory schools will be the first manifest result of this more intelligent elementary training, and will be sufficient evidence that the change has taken place. That result the Committee does not believe is remote; but it is not likely to be hastened by further action on its part. When, however, it is attained,—be that time five years hence, as the Committee hopes, or fifty, as may prove to be the case,—then, and not until then, will the preparatory schools perform their work in elementary English instruction efficiently, and without encroaching on the work appropriate to the University; while the University, relieved of rudimentary drill, will be able thenceforth to devote its means and energy to its proper function, that of the Advanced Education.

CHARLES FRANCIS ADAMS,	} <i>Committee.</i>
E. L. GODKIN,	
GEORGE R. NUTTER,	

JUNE, 1897.

APPENDIX.

NORMAL SCHOOLS.

Page 406.

No. 1.

At the Normal School [Massachusetts] we were given no training in English as English. In connection with the various studies we were told to write essays on the different phases of the work, but the work was criticized only in reference to the knowledge contained; the English being made of little account. I think any work in English would be a most beneficial addition to the Normal training. A course in theme writing might well be introduced. Power to use English correctly should be most thoroughly drilled into persons intending to be teachers, and yet there is no such training given in any Normal School in the state.

I should therefore recommend at least a one year course in English writing for the Normal School. Daily themes — describing matters of present interest — together with fortnightly themes would afford an excellent course to round out the otherwise excellent training which the Normal School affords.

No. 2.

The defects in my preparatory training are very evident. My compositions never underwent severe and careful criticism. In the High School I had practically no training in writing English; merit, it had none, its defects were due to negligence. The time that should be given to composition was devoted to the study of grammar. The same is true of the Normal School. The writing of compositions was delayed too long. We were supposed to write a good thesis without any training. The system can easily be improved by giving much less time to the formal study of grammar and much more time to the writing of regular and careful compositions.

See also page 421, note.

THE DEBATE.

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No. 3.

The one great unfavorable criticism which I make of my early training in English composition, however, is not that I did not receive training in the principals of composition, or that the hours for it were cut, but that I did not receive practice enough. Pupils disliked to write and teachers to correct, and therefore by unanimous consent we wrote but little. I have compared the work which I shall do in the half course in English which I am taking this year to my last year's course in the [Massachusetts Latin School where I was prepared for Harvard]. In the Latin School my average number of words a week was sixty. In English *B* my average per week will be two hundred and fifty. If we consider that these two hundred and fifty words are rewritten then is the comparison of sixty words in the Latin School a week to five hundred a week this year in College. If the amount written in English 22, is double that written in *B* there stands the comparison of sixty to one thousand or sixteen to one.

No. 4.

From the School at Hartford I went to [a New England Academy]. The practice in English was singularly elementary in comparison with the attention given other subjects. Once a week the class met to recite a lesson in English grammar which no one had looked at previously. This was supplemented by writing a two page theme once a month and by reading the *Lady of the Lake* outside of the class. The class in Algebra, Latin and Greek met every day for one hour in great contrast to the classes in English a knowledge of which was taken for granted.

My experience has been that English is regarded as a very secondary subject at most schools in America the teachers consider that a scholar obtains a sufficient knowledge of his own tongue in doing his other work.

English should at least receive the attention that Latin and Greek get and the work in the preparatory school should be pushed far enough to enable Freshmen to anticipate English *A*.

No. 5.

But besides the mental training which men frequently fail to bring to college with them, there is needed a sense of proportion and appreciation which can be developed in no better way than by the frequent exercise of writing English composition. It is this practice which men need before taking the prescribed Harvard English. To expect them to comprehend the principles of connotation fully when they

cannot even put a simple sentence together properly seems as futile as it would be to expect a child to learn to walk by having lectures read him on the correct method of locomotion. To instruct such men in the ways of descriptive writing is of no more advantage than a lecture on word painting would be to a bill poster. Therefore I say, let more English composition be taught in the preparatory Schools, and less thumbing of the dictionary in attempts to acquire modern languages. Without such preparation the Harvard courses are like splendid tools in the hands of workmen provided with no proper material upon which they may use them.

Of course there are plenty of men whom endless culture could never teach to write well; there are again men at Harvard who might, perhaps, more profitably turn their attentions to other English courses, were it not that conflicts in hours compel them to take the prescribed English; but generally speaking, if men came to college with their perceptions more keenly developed by the frequent practice of carefully writing exercises in their own or some other language, I feel sure that more benefit could be derived from the excellent courses given us here at Harvard.

No. 6.

While, then, my Preparatory work seems to have been excellent in the sort of work I have mentioned; as this included all of my written work, it is evident that a very important part of my English work,—viz. writing compositions,—was neglected. In suggesting improvement, however, I would not have the other work reduced, but have the composition work added. We had but two recitations a week in English, while in my first year of Latin, we had nine recitations a week: my point is, that four recitations a week in English would have given me a far better foundation for College work, and five recitations a week in Latin would certainly have been sufficient for that first year's work. It seems very strange to me that so much time is spent in the study of Languages—Especially Latin and Greek—before we have little more than a slight knowledge of how to express ourselves in our English tongue.

No. 7.

I don't like to recall my preparation in English, and it grieves me greatly to write of it. I shall try, however, to give as accurate an account as my poor memory will allow me.

In the college preparatory course in the High School [of a city near Boston], from which I was graduated, but two years—the first and the last—were given to work in English, and then but two hours a week.

The first year we read Lamb's "Tales from Shakespeare," and Longfellow's "Evangeline," besides numerous other books which I do not remember. After reading we were required to write themes and essays upon them. Once a week we wrote themes; work very similar to that in English A. We had, also, an extended drill in

punctuation. This first year's work I think very good. Could I have gone on in the same way during the other three years I would have no reason to bewail my English preparation. But it was not again until the last year that we "college boys" as we were called, heard anything more about English.

In my senior year we took up the reading of the books required by the English department here at Harvard for the entrance examination. The books that I now remember are "The Abbot," "The Merchant of Venice," "Twelfth Night," "Comus," "Il Penseroso," and "L'Allegro," "Lysias," "Evangeline," "Sir Roger de Coverly Papers," "Essay on Milton," and I do not know what others. We were given topics from these books to write upon, or sometimes the entire book. This was very helpful as it was exactly what was required in the examination. I remember distinctly how hard it was for me to struggle through Addison's composition on Milton called an "Essay."

In addition to reading the required books, there were incorrect sentences to correct. This is a kind of work in which a little goes a long way: yet day after day, week in and week out, throughout the year, we had our twenty or so sentences to correct. After correcting them we were required to hunt through a long list of rules to find the one which applied to each particular sentence, and then to put the number after the sentence. This method of procedure seemed nonsensical to us. We thought we should be given a list of rules, if it were necessary to learn the rules, and then sentences to correct by them. As we thought we were getting no good from this work—I think now that it could have been nearly dispensed with, and advantageously—we took no interest in it, and often times the work was not truly and honestly done.

This last year's work was all right as a preparation for the examinations; but I think it is better to have the drill such as to thoroughly ground one in principles. Composition as it is carried on here, that is the development of each individual's style, was entirely neglected from the result of which I have greatly suffered.

There has lately been a revision of the curriculum at [my] High School. I hope and trust that English has been given a place there, fitting to its importance. I think that the work done in English *A* could just as well, yes could be better done, in preparatory schools, leaving the time in college to composition courses such as English 31 and 22.

No. 8.

My training in English at [a central Massachusetts] High School, where I fitted for college, was confined to fortnightly themes, which continued throughout the greater portion of the course. It was not connected with any study of Rhetoric or Grammar so far as I can remember and the instruction was of the most formal and barren kind. No attempt was made to develop originality of thought and expression or to stimulate the imagination by the setting of good models. It was a dreary, mechanical drudgery, unlighted by a single gleam of interest. The subjects, assigned by the principal, were stereotyped and prosy "Peace and War," "The manufacture

of sugar, cotton etc.” subjects, which had no human interest to the average boy and which compelled recourse to encyclopedias and books of reference, instead of human observation. The results were meagre and were what might have been expected, when the narrow aims of the instruction are taken into consideration. It ground out boys, whose work would rival a good dictionary in vagueness and lack of interest. From the High School, I went directly to [an interior New England] College, where the prescribed English consisted of a study of Genning’s Rhetoric during Freshman Year. The course was conducted by [an instructor who] had some vague glimmerings of how to teach English and teach it successfully. There were usually class room exercises, at which a student lamp, an oil painting, a stuffed hawk etc. were placed on the lecture table and the students were asked to write a description in their own words. This was varied at times, by a request to write, from memory, a description of Weston Field, the view of East mountain down the street, the last foot-ball game etc. There was no attempt to develop the underlying principles of narration, description and exposition. Indeed principles of any kind were chiefly conspicuous by their absence. It was the old story of the “Blind leading the blind” and the results again were of no greater value than in my preparatory work.

No. 9.

My English work before last year does not play a very important part in my present status, except probably as preliminary for what followed in my direct preparation. We are asked “wherein your training now seems to have been good and sufficient.” In my case that is not difficult to answer; it has not been good and sufficient at all, as far as I can see when applied to my present needs. The dry details of the rhetoric I understand pretty thoroughly and I know the principles of description and narration but, try with all my power, I cannot put them into practice. At the tenth revision of my themes they are as imperfect as at first and, when they come from under the instructors pen, they are very highly colored. Incoherence, awkwardness and point of view are my greatest faults. Whether incoherence comes from lack of thought or inability to express myself, I cannot say. It is surely connected with awkwardness and probably with point of view. All three then come from one cause, lack of training and practice.

No. 10.

I received my earlier training in English in a little old district school far up among the New Hampshire hills. “Lickin’ and larnin’” was the motto of the much tried teachers. Of “lickin’,” at least, I received a full and sufficient share. The prim old maid who taught me my A, B, C, and the rudiments of English composition, was true to her duty and never spared the rod. I was literally goaded and beaten along the rugged road that leads to the Elysian fields of “larnin’.” From the dry and dusty rules of an old grammar I was supposed to learn to speak English in its virgin purity.

The most dreaded task that fell to my lot was what we then called "putting sentences up a tree." Long complex sentences were given us to analyze and put upon a diagram. I invariably got some clause upon the wrong limb of those cursed trees, and never failed to get my reward in the form of a dose of extract of birch. I was not an assiduous bee, and the honey that I extracted from my dog-eared grammar was of poor quality and still poorer quantity. If, as Stevenson says, "Failure is the only high-road to success," I ought now to be well along on my journey.

My next experience was gained at a Grammar School in [a large Massachusetts town near Boston]. About once a month the students here were required to write short compositions, the best of which were read by their writers before the class. On every Friday afternoon our teacher read aloud for an hour from some interesting book. This was to me the pleasantest hour of the week, eagerly anticipated and seldom missed. I gradually lost all taste for those "blood and thunder" stories sometimes falsely called literature. Guided by my teacher in my choice of books I became deeply interested in good literature, and have ever since found great pleasure in reading.

After a year of preparatory work at the Grammar School, I entered the High School, where for two years I continued my study of English. The critical reading of required books was about all of our work here. What little writing we did was in the direction of poetry, though our attempts were painfully crude. Sense was often amusingly sacrificed for meter, and the latter was always in deep subjection to ignorance and small vocabularies. I believe our time would have been better spent in trying to write good prose.

On entering Harvard I expected to make rapid strides in ability to write good English, but was wofully disappointed. It seems to me that I might as well have never taken English A. Certain it is that my year at [the Academy] was more beneficial to my style. I believe that I did the work of the course faithfully, but the amount of work required was, I think, ridiculously small. The course seems to me to be far too easy and elementary for a college of Harvard's standing. It should belong to the curriculum of a preparatory school instead of to that of a great University. In all my school work, as in English A, I believe that far too little practise in writing has been required. I should have always been glad to do more writing, as I think most other fellows would.

No. 11.

It seems to me that the requirements for the entrance examination are wholly inefficient as far as composition goes. One gets slight snatches of good english works, but reading what others have written, does not teach you yourself how to write. It is like watching another person use pulling-weights, so that you may get strong. If the training gained by daily themes were afforded in preparatory schools, the result would be a great improvement of work in college courses. By the practice of daily themes, a person gains a readiness in expressing his thoughts. He attains ease and fluency in writing, and instead

of pouring over a blank sheet of paper, and in vain trying to frame his thoughts in good words, he will be able to write with ease and rapidity.

No. 12.

The lack of constant practice in writing, such as I get in College, is, to me, the principal defect in my former instruction. I was taught the abstract theory of rhetoric but I was never shown how to put it into practice. Ability to write in the mother tongue is the most necessary requirement of an educated person, and it is a pity that it cannot be impressed upon the minds of those in authority in western schools that that ability is at least as important as the study of botany, algebra or Latin.

No. 13.

It can be seen from my description, I think, that the English work at [the private school in New York city where I was prepared] is not thorough. It does not give one any help for the work of the freshman or sophomore years at College. If more original work were insisted on and more frequent work in theme-writing and, above all, if it received one half the care given to the instruction in Latin, Greek and Mathematics, it might be a fit preparation for college English. When I was there it was not.

No. 14.

[A Massachusetts city Latin School.]

I do not think that I had enough training in writing English. I did not write often enough to gain any degree of facility. It seems to me that in the last year or two, I should frequently have been required to write slight impromptu exercises in the class-room as is done in English A. I did not write often enough to have it anything less than a very distasteful, laborious task.

No. 15.

[A Massachusetts High School.]

The last year was spent, almost entirely, on the study of Milton, with an occasional theme in connection with the work and a review of the entire subject. We also studied Addison and read Macaulay's essays on Milton and Addison.

On the whole, it seems to me that a great amount of time is wasted in the study of English (at least in my experience) in the preparatory schools. Not one half enough time was spent on writing and into the time set apart for that portion of the work so much was crowded and gone over so hastily that very little was learned. That is the reason why so many students come to College with so little ability for correct writing. No doubt our instructors mean well enough, but the method is at fault.

No. 16.

[A Massachusetts Academy.]

This was all the English we had during the six years. The time spent on it was not nearly equal to the time spent on Latin or Greek. The former received by far more attention than any other course in school. The longest preparation hours were always given to Latin, and the recitation hours always came first thing in the morning when the pupils were at their best.

As a summary of the work in English, I think I can truthfully say that I learnt more in writing English from the letters I wrote home describing athletic contests and other events of boarding school life, than I did from the school work, because they were returned to me corrected, and because they were written on subjects which I felt I knew all about.

No. 17.

[A Massachusetts Academy.]

So far as I am competent to judge I cannot see that my training at school has done me much good. It certainly did not train me to express myself easily and naturally on paper, but in order to learn to do this a person has to write continually and I cannot see where a school can get the time to give to writing, when it also has to teach boys enough Latin and Greek and Mathematics to pass college examinations.

No. 18.

[A New Hampshire Academy.]

It appears to me that the main thing that a fellow should learn *before* entering is to *write good English*: after entering he should be able to devote himself to literature, which he cannot do as things are at present.

No. 19.

[A preparatory School in Illinois.]

It seems to me that the preparatory schools don't have the pupils write enough. Daily themes are a bother, a dreadful bother but there is not a doubt in my mind that if the daily theme plan were instituted in the preparatory schools the pupils would come to Harvard with an infinitely better command of the English language, his vocabulary would be broader, his diction more cultivated and his style more pronounced. In the schools I have attended the study of rhetoric and grammar was severe but the theory was all we had little practical application of the theories. No one on earth curses the daily theme more than I and yet I know in my heart that it is the best plan in the world for developing literary talent. •

No. 20.

[A Massachusetts city High School.]

There is no other way in which to learn to write good English than by hard and steady practice. A beginner at the piano can never expect to learn to play well, until he has practiced and studied for hours and even years at a time; so I do not see how a tyro in the English Language can ever hope to be able to write good and Rhetorical English without long experience in writing.

I think that the great mistake in the public schools is the lack of English training for pupils, when they are mere children in the primary and grammar schools. If the first principles of rhetoric and of grammar were taught in the lower grades, so that a pupil would be able to write fairly good composition on entering high school, a greater success would assuredly be attained in English by the freshman classes of the universities and colleges.

No. 21.

The next two years I was at the High School, and studied no English at all—written grammar nor composition. Preparing for college as I was, I naturally took the “Classical Course.” Now in all the other courses, I am quite sure, English was taught during the first two years. We classical scholars were left, I suppose, to get our practice in English from elegant translations of Caesar, and so much of the *Anabasis* as could be read during the last two months of the second year. Of course this amounted to nothing. All this talk we hear, and all we read in gushing school catalogues about translating Greek and Latin into good English is nonsense. How is an instructor who is interrupting the translation two or three times every line, because a tense or a mood has not been given the correct shade of meaning, to expect that the translation remember it’s own English moods and tenses? I have often heard a good English sentence of the scholar reciting, twisted and contorted into a barbarous mess of solecisms by the instructor, in order that *αδε* or an *αν* might be correctly rendered, and that we might see what an exact language Greek was. I do not say that in College it is not perfectly practicable to give a correct and more elegant translation, but with the average school boy, who is taking his Greek and Latin merely for passing his entrance examination, and who intends to drop them as soon as he enters college, it is asking altogether too much of the instructor that he teach English and Greek at the same time. His task is to get his pupil successfully through the Greek examination.

After the High School I was two years at boarding school—the last two before coming down here. The school was an Academy [in a Hudson River City]. Here they had worked out an exceedingly good theory—and printed it confidently in the catalogue—of English instruction. To read it one would think that English really played an important part in the curriculum. I have no doubt the catalogue account was written in all good faith—as we make New Year resolutions, before we have tried them—but the workings of

the system were singular. In my first year I took no English at all, and was therefore not able to judge until my second. In the second year I read all the books set down in the Harvard catalogue as requirements for admission — and no more — and I wrote I think perhaps ten themes, or “Essays.” These “Essays” were returned with a few criticisms, the jist of which was either “good” or “bad,” as the case went. Why they were good or bad the criticism never told. I do not think the instructor knew, and I am positive I did not.

No. 22.

The training in English that I received before entering college was very desultory and unsatisfactory. It consisted in what practice in writing I got in the grammar school and academy together with what little I got in teaching district and grammar schools.

As a special student in [a Western] University I went through Gunning's Rhetoric but again it was mostly theory. I believe I wrote six compositions during the year. I took, while at that University two terms in literature. In this study, I was required to state at length my ideas of each book read; I think this practice was of more service to me, in the way of writing, than any course I took before coming to Harvard.

At School and at University I was required to render into fairly good English the Greek, German, and French I translated. This had, however, only an unconscious effect upon my ability to use English.

I never heard of the idea of daily themes until I came to Harvard. I think if I could have had a year's training in them in my preparatory training there would not be so much red on themes when returned to me.

The great trouble with my training in writing English was lack of practice. I am convinced that one may be a giant in theory and at the same time be a babe in the practical phase of the matter.

No. 23.

[A Massachusetts city School and Connecticut Academy.]

In view of my later college work, in writing english, my preparation seems to have been lacking both in the amount, and thoroughness of correct grammatical construction and punctuation. I usually wrote a short composition once in three weeks, and rewrote it with the corrections explained. It seems to me that the writing should have been oftener in order that attention might not fall out of touch with the work and that grammatical construction and punctuation might be strongly impressed on the mind by a continuous reference to the subject. Such a course would have rendered the first half of the english *A* course in college unnecessary.

My work in reading was excellent but not full enough to be satisfactory. For instance, I remember of having spent, at least, four months of twenty recitations, each, in reading Scott's “Lady of the Lake,” committing selections to memory and looking up synonyms

for words. The training in this was excellent, but it would have been far more beneficial to my later work, had I covered more ground, even at the risk of being less exact. Then, I thought of my reading more as of a lesson in Caesar than of a masterpiece in my own language, full of beauty. It seems to me that more ground covered then, would have given me a more appreciative taste for good reading and a better grasp of the language. To hunt up synonyms in a dictionary, which are forgotten almost as soon as acquired, is training but to acquire a large mental vocabulary by extended reading, which renders the use of such a book less necessary seems far more advantageous. Thus my preparatory work was a training which has rendered later writing far more easy, but which, with a little better arrangement, might have put me in college at least half a year in advance of where I was when I entered.

No. 24.

I received in [a California] High School, my training in English composition. I must say, at the start, however, that my work, as I remember it, seems to have been more in the nature of gaining a superficial acquaintance with English Literature, and a knowledge, perhaps a little less superficial of the *ways* of writing English, than of real practice in *writing*.

During my first year, in High School, the class studied some of the more difficult points of English grammar, with a little rhetoric. Occasionally, we had to write short compositions, which were corrected by the teacher, but were not rewritten. Here, I think, was a fault at the very beginning. At that age, we got back our written work, looked for the grade upon it, and then threw it away. The corrections did me no good, since I hardly ever looked at them.

The second year, we were taught, with the help of a very long outline, which we had to learn by heart, the principles of perspicuity. The long outline we learned; the principles we learned to recite, much as a child may learn to recite a piece of German, the meaning of which he has not the slightest idea. At any rate, that is the way I learned them. It was not until a long time afterward, that I began to understand the application of the principles. Beside the outline, we had some work in books; learning whether the matter therein contained was perspicuous, or not. Our exercise in writing, that year, was rather slight.

The work of the third and fourth years was on about the same plan. Our teacher, a graduate of [a female] college, was an enthusiast, a crank, on the subject of outlines. She gave us outlines on perspicuity, outlines on force, outlines on elegance, versification, argumentation, exposition, and narration, and outlines on description. We got to calling her, after a while, "the walking outline." I do remember that she once gave us an outline on the best method of writing a composition, which we never wrote. We learned what things ought to go into the introduction what things into the body of the composition, and what into the conclusion. The trouble was that we never, to any extent, put these principles into practice. We learned their names, with all their subdivisions, but, being given

nothing for which to use them, we soon forgot them. We were told that certain authors had certain qualities of style. If I had been asked to comment upon the style of any author whom we had not had in class, I should have been at a loss to say whether he wrote clearly, or forcibly, or elegantly, or whether he had none of these qualities.

I may therefore say that while I learned fairly well the theories of English composition, I did not learn how to put these theories into practice. I learned what exposition was, but wrote none; I learned what good description was, but wrote none; and so with all the rest. Even though I might have been able to tell the characteristic quality of a given author's style, I could not hope to attain to the possession of that quality. I am thoroughly convinced, as, I suppose, is everyone else, who has thought about the matter, that a good English style cannot be attained by merely learning what good style is, and what authors have that rare possession. The knowledge of these things is a good thing, in its place; but personal practice in the difficult art, is, to my mind, what we most need.

From the results, thus far, of my English composition, here in college, I conclude that we should not put off practice in writing, until we have learned all the theories, and read all the good authors. If, after we had mastered the principles of grammar, we began to practice writing, and continued to practice throughout the preparatory course, we should be far better able to express ourselves, by the time we enter college. Coming to think, this is a sort of theory. Would that I had had the wisdom to put it into practice.

No. 25.

[A Massachusetts city Latin School.]

The trouble with the instruction in English of the average American student is that he has no solid foundation as a working basis. You cannot expect the subsequent instruction to take root and bear fruit when there is not enough soil. I feel sure that at least fifty per cent of the fellows entering college are unable to parse correctly a complex sentence in English. This simply means that the rudimentary knowledge is lacking. The whole fault lies with the preparatory schools, where so much valuable time is lost in aimless instruction. What business has a college to waste its time in giving badly prepared persons instruction in the elementary knowledge of the language? The college work should consist of the higher branches of English. English *A* should be relegated to the schools. As I have intimated before the reform must begin at the bottom

No. 26.

[A Boston private preparatory School.]

In no way does my preparatory training in school seem "good and sufficient" and English *A* seems to be "defective and to admit of improvement."

English *A* should be taught in school. In three months anyone of reasonable understanding can gorge himself with rhetoric. After

three months there is a clogging of the brain, a distaste and disgust of the subject which I think last year was felt by instructor as well as by pupils.

In the preparatory school, a candidate for admission to college should be given a knowledge of English literature such as the college demands, and in addition to this should know his rhetoric and should have ample practice in the application of his rhetoric. English 22 should be the model for the schools. Though I think that daily themes are impracticable there is no reason why there should not be weekly compositions with subsequent revision or rewriting. Translating the classics is of course an aid to English but a minor one.

I think that the fault is at bottom with the college. So much is required in other branches of learning, that the most necessary one is shamefully neglected.

It is proverbial that Americans visit all the countries of Europe, but to them the Yellowstone Park and to the Eastern the Golden Gate are unknown.

Thus in school, a lad pegs away at his Greek and his Physics, and graduates with a lack of knowledge of his mother tongue which should put to utter shame, himself, his parents, and his teachers. But the excuse, and the good excuse is that the demands of the college leave only so much time for English and the pupil must assimilate it as best he can from anywhere.

Why not give up making the study of Greek compulsory. A man in this busy world can get all the classic study he needs from Latin unless he chooses to make the classics a specialty.

This would leave more time for the English which a boy certainly needs more than he does Greek.

Not to offer any more suggestions, it is my firm belief that every man should enter college prepared to take a course like English 22 and prepared to do moderately well in it.

When he comes to college let him learn to expound and to argue and to polish his narrations and descriptions but he should know the rudiments of these latter styles of writing.

I speak strongly but I feel strongly and have many friends who like myself resent the indignity paid to our mother tongue in neglecting it so shamefully.

No. 27.

[Three New England public and private Schools.]

Considering my training in English before entering college, from what I have learnt while there, I cannot see how it did me the slightest good. What little I learnt, was sufficient to pass the entrance examination with; so I suppose that nothing more could be expected of the schools, as their aim is, of course, to fit pupils to be able to pass the examinations for college. Either more should be required, it seems to me, or the student should not be required to go over practically the same ground again, as he does in English A. To be sure he goes over it more thoroughly in college but why should he not go over the ground thoroughly once for all, before entering college? The ground covered by English A could easily be covered,

with perfect satisfaction, in the preparatory schools. Proof that this can be done is shown by the number of students entering Harvard who "anticipate" English A. So it seems to me that a student should no longer be required to do one year's work in two: either that his training before entering college should be so thorough that it will not be necessary for him to go over the same ground again in English A, in his first year at college, or that he should not waste his time before going to college in half-doing work that he is required to do later. For I consider that the time I spent on English during the four years before I entered college was completely wasted: when I came to Harvard I had to go over the same ground, which I easily could have, and should have, been made to sufficiently cover in the four years, — now misspent — preparation.

No. 28.

In my five years' study of Latin and three and a half of Greek at [a New York Polytechnic School] we were at first required only to give a fairly literal translation but, in the last two years of each, very particular attention was paid to a good free rendering and a correct use of the English idioms and colloquialisms.

Twice a week during my last year we read, in class, the major part of the requirements for the admission examination in English here at Harvard. This exercise consisted in reading and discussing each day, ten pages or so which had supposedly been prepared outside — a crime of which I believe I was once or twice guilty. The fortnightly themes continued, as they had during the previous five years, but subjects were, as a rule, now chosen from books we had recently been discussing in the class-room. The only suggestion I can remember in regard to the mechanical structure of my compositions, as a whole, was that at about the middle of the first page, I should begin a new paragraph. Neither knowing why this was so, nor considering whether the sense required it, I used methodically, ten lines down, to start a new paragraph. It was certainly a most barbarous suggestion and one that didn't tend to improve my knowledge of the art of correctly writing the English language.

Looking back upon my early preparation, I sincerely feel that, with the exception of the practice I gained from being made to translate the classics freely and in good English, it was a howling farce. Spelling and punctuation were the only errors ever corrected and, as good penmanship was also demanded, these three were the only canons I ever attempted to observe.

No. 29.

The idea in laying out the course in English in the Preparatory Schools seems to be to try the inductive method. We are given a great deal of model literature to read in the hopes of having us adopt the style of these writers. But the system seems strangely inconsistent. If we are to get our ideas of correct and forcible English from reading, why do we stop in the Preparatory School,

and in college, commence to study the rules and theories? College should be just the place to do careful work in reading, backed, as we should be, by a knowledge of the principles and the foundations of English.

The fault of the preliminary training is the scarcity of written work. Compositions were seldom called for, so we missed all help of practical work. When I entered college, I knew nothing about the requisites for a good theme, even though I had read Addison. The trouble is, we can admire no author without knowing in what his charm lies. We may say a story is good and yet be ignorant of the ordinary laws of the narrative. A few, such as the necessity of motion in stories, you are bound to acquire, by induction, but those that lie below the surface can be learned only from men whose reading has been a hundred times as wide as yours.

From what I have said, it is hardly necessary to express an opinion of English *A*. It does seem strange that the rudiments of Latin, Greek, French and German are required, though the elements of English are to be taught in college.

No. 30.

I studied English for two years [in a New England Academy] before entering college: our course was interesting enough; we read books; looked over Mr. Hill's rhetoric occasionally; discussed plots of stories, and received all the pleasure possible, but we received no practical power in using the language. We read plays from Shakespeare, sketches from Addison, *Marmion* by Scott, and a great many more good things, but, through all the time, we had no compositions or writing of any kind. The whole story is this—the first part of our course,—we might say,—was given up to seeing what other men have done; the last part,—the extreme end—was given to preparing to correct sentences, likely to be given on Harvard examination papers, and no time at all was taken for seeing whether we really could do anything for ourselves or not.

Classics were carried on for the classics, not for English. In Virgil, true, we sometimes were asked to write out a translation into good English, and were marked accordingly, but on the whole, we were allowed to translate into student dialect, so long as the meaning followed the Latin or Greek, as the case might be. French and German were carried on the same way, now and then, our instructor took a stand on good English translations, but soon relented, and fell back again to the old way.

No. 31.

My first training in English, I received at [a school in Texas]. It consisted of one theme each week, the subject left to the writer's choice. As we corrected these themes ourselves, and as our teacher never took the trouble to glance over any of our work, I am afraid my first training was rather superficial. The school, however, was a small one, and every Friday afternoon, each man had to read his theme before the rest of the scholars.

This method, though somewhat peculiar, in spite of its many disadvantages has some very good points. No one likes to make a laughing stock of himself, and the cases where a student would stand up before all his associates, and disgrace himself by reading some miserable excuse for a theme hurriedly and carelessly written, were few and far between. So self-respect was usually a sufficient incentive of a good, sensible and thoughtful piece of writing. If it was not self-respect, it was a wholesome fear of our master, who felt no scruples in wielding a hickory switch, and whose brawny right arm was always equal to the task.

Of course, as practically no attention was paid to the mechanical part of the work, such as punctuation, spelling and paragraph arrangement, that was always faulty, but in the main, the substance of the themes was good, and, as far as I noticed at the time, continually improved in quality.

I next attended [a private school, in New York City]. There I met with the same system of weekly themes, only these were carefully looked over by the instructors, and carefully corrected. But attention was paid chiefly to the mechanical part of the work, and a theme whose punctuation and spelling were good ranked higher than one whose substance was infinitely better, but which was lacking in other respects. I remained in this school three years, and though under the very best instructors that could be obtained, I don't think I made much progress. I learned where to put a comma, and where to begin a paragraph, but I don't think that constitutes a training in writing English.

But, what I consider the chief fault in the training I received, is the fact that I never had more than one theme a week to write, which I think entirely insufficient, as it is my idea, that nothing less than carefully prepared themes every or every other day, of different lengths, and on widely different topics, can give the practice that is needed, to write good English.

No. 32.

[A Massachusetts city High School.]

My work in English, both in composition and, especially, in literature has been neglected, seemingly for the reason which I have already noted, namely, that I would have all I needed in college. I believe that the rules of English construction and the ability to detect errors is of the utmost importance to everyone who expects to write even an occasional letter, and absolutely indispensable to the business and to the professional man.

That year, past without any specific practice in the art of writing, was certainly a detriment which was increased by daily encounters with un-English constructions in the Greek and Latin, literal translations of which were so often allowed, that I have not yet been able to lose them entirely.

The fortnightly essays were not only not numerous enough, but the course in which the chief benefit might have been derived was not followed: re-writing was not required.

The principal aim of the preparatory school seems to be to get men into college without conditions, no matter how they fare afterward. As far as entrance requirements demand, the preparatory school is very scrupulous, beyond that, it refuses to act. Otherwise this most important item in every man's education would have been treated with more consideration.

No. 33.

[A New Hampshire Academy.]

My whole preparatory training in writing English, as shown above, was wholly profunctory. All the instructor had on his mind was the entrance examination. He talked of nothing else and would inform us of this and that, that would please or displease the instructor. The thought of what we might gain or lose after the examination, I do not think ever entered his head. This was not his fault by any means but the fault of the faculty. He was placed there to try and make a lot of fellows pass an examination who previously had had no training in writing English whatever, and a year is an exceedingly short time to accomplish that in. The examiners were very lenient of the English on the papers so the school itself did not suffer much from this difficulty. The school now I believe has given the study of English more thought so now the fellows come down properly prepared for their future studies in that subject.

No. 34.

The great fault of the Preparatory School is that it simply prepares, and does not lay a permanent foundation for knowledge. I was often told at [the New Hampshire Academy where I was prepared]:—"Now, this is simply to make you ready for the examination, you'll probably forget all about it afterwards."

No. 35.

The training which I received before I entered College in writing English was so inadequate that I may almost say I had none at all. I had been sent to a School [in New Hampshire], and outside of writing letters to my family, I don't think I ever put pen to paper to express how I felt or what I thought on any subject. The year I was to take my preliminary Examination for Harvard I left the school and being ill I had a tutor. He did not think it was wise to take up English. As he considered the time spent on other studies of more advantage. In reply to a protest from my family he said, "The Harvard Examination in English is really extremely easy, it requires very little time for preparation."

Consequently I had no training in English until the year before I entered College. For my last year I was sent to [a private preparatory] School in Boston and here we had one resitation a week in English in which our themes of one page in length of the proceeding week on subjects taken from the prescribed books were criticized. I remember I had twenty hours of resitations a week, that is one twentieth of

my time was spent on English, and why? Because no more time was required to pass it.

Now this seems to me to be at the bottom of the whole trouble. To the average fitting school teacher the standard of the world is the passing mark in the entrance examinations. These men have learned by experience where to put the time to make it show, and have found English requires no more study and consequently give no more time to it. This state of affairs can to my mind be easily changed by requiring a higher standard at entrance, what is now required by English A.

No. 36.

I received my first training in English at [a Massachusetts city] Latin School. In my first year there I studied Chittenden's English Composition and also read Scott's *Lady of the Lake*. In the second and third years, I read Longfellow's "*Evangeline*" Scott's "*Marmion*," Irving's "*Tales of a Traveller*" and "*Shakespeare's*" "*As you like it*." In addition to reading these books, the class was required to write three ten minute compositions a week on subjects given out at the time. These subjects were many of them outlandish, for example, "*He was a mean old miser*," "*Times when it is hard to talk*," "*Thanksgiving at the poorhouse*" etc. How can a scholar sit down and in ten minutes write a story on a miser, or what does he know about the celebrations in an almshouse unless he has been there himself, which is not likely? The scholars at last refused to write on such subjects and then were allowed to select their own which was more satisfactory. The criticisms of the compositions were not helpful, and as the pupils were not required to rewrite the themes very few, if any, paid any attention to the corrections and consequently did not improve in style. The teacher herself could not have understood the subject any too well, as after one boy had handed in a theme deliberately copied from one of Emerson's essays, it was returned to him covered with such corrections as "*poor*," "*bad order*," "*poor constructions*" etc. The fourth year we had no English at all except the "*Journal of the Plague year*" to read outside.

No. 37.

[A private preparatory School in Boston.]

As I think of it now I am alarmed to think how little attention was paid to English at school and what is more I hold this lack of attention to be particularly prevalent at private schools, which simply put enough into a fellow and barely enough at that, to ensure his getting into college. How much more knowledge than this he acquires is a matter of no importance seemingly.

How English is dealt with at the big Public Schools I cannot say but I certainly hope that action will be taken in the near future to require more knowledge of English than was possessed in my day, a lack which showed itself not alone in English composition but in translation some of which was execrable, which might have been expected from street Arabs.

No. 38.

Any person who has followed the lines laid down [at the private school in New York city at which I was prepared for Harvard] should have no difficulty in passing the entrance examination in English. But the mere passing the examination does not mean that the student is fitted to enter the course known as English A, and this is where the school makes a great mistake. She does not consider the welfare of the pupil after he has left her doors. Her main object is to teach him enough English to pass his examination, and then she gracefully drops him, and he has to fight his way through English A without knowing a great deal about the work. This is the most glaring fault of instruction in schools, and it applies to many studies other than English.

No. 39.

[A Massachusetts city Latin School.]

The fifth year was spent in preparing us for the preliminary examinations. As English was not one of them they considered it as a secondary subject. The only English we had was the reading of some of Shakespeare's plays. Although we were continually being warned not to make such blunders in our sight translations and that our papers would not be accepted over at Harvard if they contained such English.

Finally in the sixth year they tried to make up for lost time in teaching English. They seemed to teach it to us for the sole purpose of making us pass the examination, because they continually used examination papers as references and they said all the time that we must do this or that if we expected to pass the examination.

No. 40.

[A Massachusetts city Latin School.]

It seems to me that the all pervading idea at the school was not so much to give us a lasting knowledge of the English language, but rather to force enough of the rudiments of the language into our heads so that we should be able to pass the examinations for Harvard. When we made a mistake in anything the teacher would say that they marked this very hard at Harvard; instead of merely telling us that it was bad English.

No. 41.

[A Massachusetts city Latin School.]

I think that the training I received was as good and thorough as is possible for a schoolboy to receive profitably. The greatest stress, by all odds, was laid on grammar, — though certain percentages of the mark depended on Style, Penmanship, etc. — and on certain points of style dear to the Harvard instructor's heart, such as the cleft infinitive. We were drilled on this until we could detect one at first glimpse.

No. 42.

In general I think, from what I have seen myself and from what I have heard of other schools, that in no school in Boston is enough attention paid to English or sufficient time given to it. The two schools which I have attended give, I suppose, about the best instruction in English of any, but even here it is awfully weak.

The fault seems to me to rest greatly with the College, which scarcely demands a sufficient preparation in English. It seems to me that the plan of publishing the English examinations with the names of the schools from which their writers came, is an excellent idea and would do much to show the utter incapacity of certain schools as regards any intelligent instruction in English compositions.

If the schools could be compelled to do the elementary work which is done in English *A* and Freshmen could be saved the waste of time caused by sitting through some 50 utterly stupid and uninteresting lectures on Rhetoric, which could be easily condensed into half that number, it would be an excellent thing. More practice in writing English should be given in English *A*.

No. 43.

Most every college man by the time he has taken one or more English courses has been greatly impressed by the wide breach between the study of English in College and that of the preparatory schools. The greater number of us began our English education in some public school where great attention was paid to the study of grammar but little practice was had in writing English so that when we went to a high school or a preparatory school we were like men of theory dropped into a world of practical people.

My experience in writing English before coming to college was derived mainly from two schools [in a large New York city]. I had no practice to speak of in writing English until I reached the third grammar grade. I remember that three short selections from the works of Irving and Tennyson were read to us and we summarized the reading. We were thoroughly drilled in grammar and were always corrected for the slightest mistake in pronunciation or grammar in our recitations but we lacked practice in writing English. As a result, in our examinations it was always extremely difficult for us to express ourselves and our work was thus hampered greatly.

No. 44.

Out of eight years of elementary schooling and four years of High School instruction, in [a Massachusetts city], I remember but two years practice in composition. During the last two years in the High School, I wrote compositions, some on my own subjects, others on the different books required for College preparation. That was all, probably an average preparation in small cities. A certain small cousin of mine who goes to a public Boston school is required to compose on specified subjects. Her age is seven. From the amount

of work, I have seen her do, and from the result of her labor I am convinced that it is a mistake to require such work from very young pupils. But I am sure that two years preparation for College is hardly adequate. It is enough fitting for English *A* in this University, but English *A* work should have been covered before the College course is begun. Surely the elementary principles of Rhetoric should be almost as second nature to a scholar before the age of eighteen. Nearly all students at Harvard, have been prepared at prominent Academies. In these Academies, the principles of rhetoric are thoroughly discussed. Even I, in my poor High School, became well versed in the teachings of the charming Mr. Strang, and others. I believe that I could have done English 22 work last year quite as well as this and so could the other students also.

Daily themes are beautiful practice. I really can think of no method of teaching composition writing which is as efficacious as this. I can see myself, boiling with rage, as I would have been had daily themes been required, when I was in my preparatory school, but I wish they had been required. I always had to write themes upon books. What good did it do me to write a composition based upon Macaulay's Milton? If I had not been an enthusiastic reader of fiction and if I had not kept up a correspondence with numerous people, I believe I should not be able to express my ideas even with the smallest degree of fluency.

I consider the chief faults of my training insufficiency of amount and quality of work required, inadequacy of time, erronical notions of the kind of exercise best suited for training.

No. 45.

[A Hudson River city Academy.]

In the entire course of six years, I do not recollect having written any composition longer than one page, with the single exception of my oration at commencement. However, influenced by the Harvard system of daily themes, [our instructor] set us to writing short narrations or descriptions two or three times a week. The composition of these themes seldom occupied more than fifteen minutes. In the course of the year the practice was given up entirely.

[Our instructor] frequently attempted to justify this disregard of written work in English, by asserting that the average boy had nothing of any importance to say, and that as soon as he did begin to develope ideas, the words and the form would come to him spontaneously. On the other hand, [our instructor] always laid great stress upon the value of Latin and Greek in giving one a grasp of the English language. To Latin and Greek, then, and more especially to Vergil and Homer, we owed all that we ever knew about English. This was no small item, however. I am sure that we all in a modest way came to feel the finish and the grandeur of Vergil in contrast to the deep power and simple beauty of Homer.

As it was, on entering college I found myself, when put to the task of giving expression to my thoughts, not only at a complete loss for words but also in complete ignorance of how to arrange them effec-

tively when I had found them. I am sure that this was not because I did not have any ideas to express, but rather because of my inability to put them in vivid and accurate form.

No. 46.

I had very little training in writing English till I went to [an Academy in Massachusetts], in 1889. While there, I had a good deal of English Composition, and had a good deal of practice incidentally in writing letters etc. During my last two years I wrote for the school paper. I received the usual instruction for elementary English for admission and also prepared for English *A* which I was able to pass before entering.

As regards work in College, I find that it has in every way been a great advantage to me to pass off English *A* before entering. This preparation for the examination in English *A* gave me such knowledge of English composition as every freshman should have. Moreover it put me a course ahead of the rest of the class as regards English, and I was enabled to take English 22 in my freshman year, and after that to take English *C* two years in succession, without getting behind the rest of my class. English *A* is much too elementary a course to be taught in Harvard college. It is a disgrace to a civilized community that men of eighteen years of age or so should be obliged to take such an elementary course. And yet the need of it is only too apparent. Some freshmen even fail to pass English *A* in their first year, many do poorly in it, and most of them show by their ignorance of the first principles of English composition that they need some such course. The fault lies with the preparatory schools. In many of these the training in English composition and grammar is a mere farce, and this is shown by the entrance examinations in English. Now the reason that the preparatory schools offer such poor training in English is that the knowledge of English composition required by the Harvard entrance examinations is very slight. The entrance examinations in English should be made more difficult, and this would necessitate the introduction into the preparatory schools of better and more thorough methods of instruction in English. English *A*, or its equivalent should be required for admission, and there should also be in the schools some elementary course in composition, on the plan of English 22. Many of the best schools are working in this direction now. Every year more and more men pass off English *A* before entering, and in some schools all the boys are required at any rate to try the examination in English *A* and are trained for it, and most of them succeed in passing it. The system of instruction in English composition was very good when I was there, but it was perhaps not quite thorough enough. However, I believe the standard has been raised since I entered college.

No. 47.

For me to make any statement which might detract seemingly from the gratitude which I always am bound to feel toward those instructors of the Latin School [near Boston], to whom I owe so much

would be both against my purpose, and contrary to my duty. Ever since I met Harvard methods as displayed, peculiarly I believe, in the English composition courses, I have been more and more convinced that something more was possible for my preparatory school. The defect in the system of teaching English Composition lies rather in the direction of quantity than of quality.

The training in writing English was given in my last two years. Not that we did not study our language during the previous three, but there was nothing done towards systematized composition. And now what did we do in those two years? Our first duty being to make ready for the Harvard examination in English, we gave our attention chiefly to the literature prescribed for us by the college. Each week, however, the class was asked for a theme, for the writing of which an hour was given. We wrote usually upon our reading, but considerable attention was given to individual thought, and never, I believe, were we expected merely to summarize. For example, I find among my old themes these subjects: "Barkis is Willin'," "David's Mother," "The Character of Brutus," and many such, requiring both a knowledge of the book represented, and some power of literary inspection.

For this system, as we enjoyed it during two years, I have only the highest praise. A stress was laid upon our language which was beneficial in every way. We were required to write our translations from Latin and Greek—one of each of which we had every week—in correct English. Our Latin instructor encouraged us even to translate Vergil at sight into English verse,—an undertaking at which several of the class were unusually successful.

I have given as best I could, an idea of the actual written work in English, as we did it. As far as it went it was excellent; I complain only that it did not go far enough.

Five years are given to Latin, three each to Greek, French, and German. That these studies are overdone no one but he who believes foreign languages a nuisance will maintain. There seems to me no reason, however, for giving more attention to these tongues than to our own. I believe that a course of practical, actual, work in writing English should extend through the whole five years. That this is practicable no one can deny, since our class gave two years each to ancient History, Algebra, and Geometry, either of which many pupils have taken in one. I remember that during our second year we covered the whole ground of Greek and Roman History, only to go over it all again during the fourth year to prepare for the preliminary examination. Certainly the time thus practically wasted might profitably have been given to a course in English Composition. The fact that but one out of a class of thirty five got honors at the Harvard examination, is evidence enough that more English, and less ancient History if necessary, would avail much.

Our school has always borne a record, at the entrance examination, second to none. In Greek, Latin, and Mathematics, her students have a preparation which none can call insufficient. Is it not a defect then, that her record in English is low? Surely were the training in writing English up to the standard of that in writing Latin and Greek, the Harvard examinations would be met with far

greater success, and the students would be better prepared to meet the somewhat chilling and overpowering atmosphere of the composition courses of the college.

Let me add in justice to whatever changes may have been made during recent years, that five years have passed since I was a member of one of the three lower classes at the Latin School [in question].

No. 48.

During the last eight years before I came to college I went to school at [an Academy in a city of Eastern New York]. My first two years there I had practically no training in writing English—at least so far as I can remember. After reaching the Academic, or upper, department of the school, my training in English composition, even up to graduation, was extremely meagre. I imagine that it was intended to have it much more comprehensive, but English was always made secondary to the classics and to Mathematics. The sentiment seemed on the whole to be “Do your Latin and Greek, your Algebra and Geometry, your French and German well, and then, if you have any time left, it might be well to write a little English.” The time, however, rarely came and the English usually went unwritten.

During my first two or three years in the Academic Department, I had, if I remember rightly, a very little class room exercise and in addition intermittent demands were made on me for the much dreaded “composition.” These compositions were only written once in a great while. Moreover, although mistakes in Grammar were marked, the compositions as a whole were not criticised and we were not required to re-write them.

During my last three years at school, my training in English was scarcely more full. Latin and Greek translations were occasionally written out and these were supposed to be in good, forcible English. A translation, however, is not by any means a sufficient exercise in writing English. During this latter period of my school education, long themes were practically never required, although in my sixth form year I had to write and speak an oration at Commencement and was obliged to write a preliminary oration for practice. It was during my last year at school, also, that the system of writing five or ten minute themes on current topics or on daily experiences was introduced. This work, carried on under the direction of a young Harvard graduate, was on the same plan as the daily theme system at Harvard. It was good so far as it went, but was not held frequently enough.

During my last few years at school I also had some “unofficial” experience in writing English in a debating club and on a school paper.

When I look back upon it now, my English training at school seems to have been entirely insufficient, if not, indeed, almost ignored. The training in English composition that the average school-boy receives is almost disgraceful. It is time that the old idea of sacrificing one’s own language to the Classics, to Mathematics and to foreign language should be done away with. English com-

position should be made one of the most important subjects in a school curriculum, for the training a boy receives in that subject will tell more in after life than that of almost any other study.

As soon as a young boy has learned to spell and has acquired the rudiments of Grammar, he should be required to write themes. These should be criticised by a capable instructor and rewritten by the student. This work should be kept up until a boy graduates. The requirements should be raised every year and in his last year themes such as are required in English 22 should be written. A boy should also study the principles of rhetoric for his last two or three years. In short, the work of English *A* should be done in the Preparatory Schools. This will scarcely be brought about unless the colleges demand it, for school teachers are only too willing to be contented with getting their boys into college well and then to leave it to the college to atone for their sins and brush up the neglected part of a boy's education. A determined stand by Harvard, requiring boys to pass entrance examinations in English equivalent to the examinations given in English *A*, would, as usual make the other American colleges follow suit and thus force the preparatory schools to pay such attention as they should to the much neglected English.

No. 49.

[A New Hampshire Academy.]

I think the work of English *A* should be taught and taught thoroughly in the Preparatory Schools. By thoroughly I mean that it should be taught not to pass the entrance examination, but that the scholars should know the rudiments of the English language. I spent some six or eight years studying greek and latin, studying the grammar, learning all sorts of arbitrary rules and yet I only studied english grammar one or two years when I was too young to understand it. At school I had a recitation every day in Greek and latin and only once a week in English. I would increase the number of the English classics to be read for the entrance examination. This would not only cultivate the scholar's mind and give him a taste for good reading but would prepare him to take some of the many literary courses in college. These, which I consider some of the best courses offered to the student, are now often neglected by students in college because they never acquired a taste for good reading.

No. 50.

[A New England High School and Academy.]

I think it is necessary then, in the first place, in order to raise the standard of the College entrance examinations in that subject, putting them on an equal footing with the classics and mathematics. It seems to me that it is a good deal more essential that a man be intimately acquainted with the elements, at least, of writing and speaking his own language correctly and intelligently, than that he be able to conjugate a Greek verb or memorize a French fable.

When the college insists, by raising the standard of their English entrance examinations, that the preparatory schools shall lay more stress upon that subject, then, and only then, I believe, will the fitting schools raise the standard of English in their curriculum.

When this shall have been done, as I hope it will, before many years, there will be no need for such "prep-school" courses as English *A* in college work. Then, when a man comes to college, he will have a good foundation in a knowledge of the principles of correct writing and speaking, and will be ready to enter at once upon the more serious English courses. That would surely benefit the college as well as the preparatory school. The time and instruction devoted to such courses as English *A* and even English *B* or 22 can then be devoted with advantage to more advanced courses, and general good to all concerned will follow.

No. 51.

My preparation for college was made entirely at [a Massachusetts city] Latin School, and the work, as far as I can remember it, was about as follows. There were the usual preliminary exercises in the correction of faults in grammar; they took the form both of oral and written tests and of class-work at the blackboards, the work being all based upon Hill's *Rhetoric*, although the latter was not used as a text-book. There was besides, occasionally, critical study of bits of standard English prose, as to their "correctness, perspicuity, propriety, and force." Written summaries of parts of the literature required for admission to college were also exacted at certain intervals, as well as compositions of medium length on various subjects connected with the books read.

But by far the most valuable, in my opinion, of all the training in English, was that, in what was called "daily themes" although in reality they came only three times a week, in the regular English hours. The first fifteen or twenty minutes (if I remember rightly), of each recitation were devoted to the writing on any subject which we might wish of a short theme, the length of which was never to exceed one page. These were corrected, handed back, and revised or rewritten by the student. By this means, habits of observation were greatly encouraged — there was, I believe a proviso that we should write on no subject that had come to our notice more than twenty-four hours previously — and some ease in handling language was acquired. More than any thing else in my preparatory school instruction, I think that this was instrumental in bringing about the transition from the crude and clumsy school-boy's style to the ease which comes from work in the "daily-theme courses" at Harvard. If these "daily themes" could be made really daily themes — could be written every school-day in the year, or if not that, every school-day for a considerable part of the year, — I believe the results would be even more beneficial. It seems, moreover, that by the adoption of some such method as that used at Harvard, by which themes are written outside the classroom — this plan would be entirely practicable.

The training that I have received in English composition before entering College has been very limited. I don't believe that all the compositions ever written by me before entering college, if I could recall the number, would amount to a dozen; that is strictly in regard to English composition.

I prepared for college at [a New Hampshire] Academy.

The way this professor, taught English while there, was in the following manner. He compelled the members of the classes, which came under his jurisdiction, to commit long passages from various reputable authors, whom he would select; at other times we read various of Shakespeare's plays with comments.

When we discontinued reading Shakespeares's plays, we were given a book with a large number of incorrect sentences in false syntax and when we came into the class-room we were called upon to correct them in a mechanical sort of way, without being questioned why we made the various corrections. Now since I have entered College, I see where that training I received, was not the sort I should have been taught for my subsequent work in College.

The training I should have received should have been almost identical with that I am getting now. During my course in the preparatory schools I should have been compelled to do more composition writing, in order that I might now be able to express my thoughts with much more ease. Instead of that, I am taking a course at present in English which should have been learned before entering College.

I received my training in English composition in [a Massachusetts town] public schools, the grammar and high school inclusive. I cannot with any amount of accuracy speak of my training in the grammar school, but will speak briefly of my high school training. The course which I followed was a three years course, known as the English course or Business course.

The school committee have made a rule to the effect that there would be two compositions a term to be written. Thus there are six compositions written a year. It is very evident that one cannot receive a very extended knowledge of English composition when so little composition work is required. The corrections upon these compositions are mainly of errors of spelling and of punctuation. The corrections which are in vogue at college should be followed exactly. Therefore I would consider it a great improvement if more attention was shown composition work both by the school committee and by the teachers themselves; English composition is of such vital importance in college that it should be duly considered in public schools which prepare students for college.

Even in the short time I have been at college I have felt forcibly the need of a more extended preparation in the theme work. Now it is evident that the school which I have attended does not give a preparation required, therefore it is the duty of the school board to have English taught in a manner which will enable the student to

carry on the work when he arrives at college. Do not understand me as in any way reflecting upon the ability of my teachers, but upon the incompetency of the school board.

No. 54.

[The High School of a city of Western New York.]

The instruction in English that I received while preparing for college was varied and of different degrees of merit. I am inclined to think that the most valuable training of all was my experience as editor of our high school periodical, which always was "hard up for copy" and accordingly provided me with much experience in careful composition.

In the light of my experience at college, I should say that my preparation was deficient, not in quality but in quantity. There should have been more instruction in Rhetoric. For those who had little or no outside practice in composition, the amount of writing done certainly must have been insufficient. I think time was wasted in what was called "Outward execution," in the perfecting of the ornamental appearance of our compositions. Perhaps it might be said that too much was taught by precept and too little by example. I do not remember a single instance when an admirable turn of thought or manner of expression was held up before us as an example of what master-writers can do and learning writers should try to do. But on the whole, much progress was made by all and few mistakes were made by the teachers in charge.

Perhaps I can do no better in closing than to quote from an article which appeared in the high school periodical recently, written by a member of the faculty who is a Harvard graduate. He is rather more tart in his criticism of the present system than I should be inclined to be. He begins:

"Doubtless, the poor pupil who writes a composition regularly the night before it is due has an unspeakable contempt for the invention of language and the discovery of duty. For the wretched specimens of writing now handed in as "compositions" there are many causes, most of which point to guilt on the part of the pupil, while the fundamental cause (involving nearly all the other causes) is inherent in the present system of teaching the subject."

He then proceeds to review present conditions, characterizing the system of teaching now in use as too "spasmodic" and closes with this statement:

"To write clearly at least and forcibly if possible is of the first importance; and the way to acquire clearness, strength and ease is to keep "everlastingly at it." Composition should be raised to the dignity of a full course with daily compositions and daily exercises, . . . such a course is surely a necessity of the immediate future; for the colleges and the world at large . . . are . . . sure that there is somewhere in the system of teaching composition at our secondary schools a great defect."

All my work in composition preparatory to college was done in the High School at [a city in] Minnesota.

The training in English, as a whole, was thorough; what was lacking was practise in writing, in getting thoughts upon paper. The whole object of the work was to give us thoughts, and incidentally to show us how to express them. The course required four years work in English, or eight terms of one half year each. The first half year was devoted to composition pure and simple. For the next three terms, or rather two, for very little work was done the second term; the works of several authors were studied, and no writing was done. The third year Rhetoric was studied from several text-books, and gave opportunity for something like twelve compositions. During the last year, the course corresponded to English 28 in Harvard, a review with outline of English Literature with a study of characteristic works of authors who represented their time. Probably ten compositions were written in this course. Expression was also studied, and an essay was delivered before the school by each senior. Before graduation, another essay had to be filed.

In all four years, English was balanced against the other work. But the balance was not kept in the English itself. The work in English seems to me to have been good, and better than that of the ordinary preparatory school. The great fault was that the work in composition, in actual putting on paper the results of the rest of our work, was weak, and this weakness is what one feels first and most strongly when he enters college.

My work in English while I was in the High School [of a Massachusetts city not far from Boston] was so limited in its scope that I can easily remember it all in detail and in a few lines can describe it completely. The first year, English was prescribed for the whole class. The work consisted of studying, or attempts at studying, twice a week, single sentences of bad English out of a little primer-like book with grey covers. We read those sentences with all their absurd and improbable errors in punctuation and grammar, and then read them with our own corrections; next, we improved on our corrections; and then again, and again, the following week we reviewed those same sentences until they were harrowed into our brains. I still have hateful recollections of flashing streams leaping down hillsides, of turbaned Turks seated on colored mats and smoking long-stemmed pipes, of Lord Collingwood on the stern of his flagship; other pictures equally relevant swarm before my mind's eye. If there is a single bad sentence in a certain elementary English book that I cannot raise to the last degree of perfection, it is not for lack of assiduity on the teacher's part.

The "college section" of the class now enjoyed a well-earned respite of two years from the study of English—a period of relaxation more agreeable to the young student's blissful ignorance than profitable

to his literary style, as this composition abundantly proves. It is only fair to say at this point, however, that all the rest of the class, the "regulars," had provided for them excellent English courses; in the second year, Rhetoric, and in the third and fourth years, English Literature. The College section could not be included in these courses because of their extensive preparation work for college.

In our Senior year, we of the elect resumed our acquaintance with the Queen's English; and sad to say, this year's work, prescribed by the colleges for admission was exactly the same as our first year's work. We had to operate once a week on monstrosities of composition — artificial monstrosities, too — and to correct grotesque punctuation. The most curious and interesting thing about this work was that we did not have to review the sentences the next week. Besides this, we read the prescribed books, essays and plays of standard English writers, and the prescribed amount was so large that our first year's experience was not repeated; indeed, we read so fast that we thought of nothing more than remembering the narrative or plot long enough to write a connected account.

With this preparation in English I entered college.

As I have thought over my High School work I have not been able to see any chance for material change so long as preparation in Greek, Latin, Mathematics and Science is delayed until scholars enter the High School. Beyond question, to my mind, however, the first half of the first year in High School should be a review of English syntax as studied in the Grammar School; for strange as it may seem, syntax is very soon forgotten, and in learning a new language the High School freshman is unable to apply the simplest rules of grammar. A teacher of French and German told me recently that she always spent the first week or two of the freshman year in reviewing English grammar, as experience had taught her that scholars could not learn French and syntax at the same time.

After syntax is mastered, there should be training in English composition, but our High School, and probably many others, cannot crowd it in with college work; yet it is evident that English study should be continuous through the four years, if for no better purpose than to counteract the bad effects of oral translation. Think of a Harvard freshman translating "*Homo barba imissa in forum incurrit*," "a man rushed into the forum with his beard which he had let grow!"

With the exception of a weekly theme, based on a part or the whole of the reading for the week, during the last year, composition was utterly neglected; a fact which I have bewailed a great many times. There seems to me to be no possible hope of improvement until some of the college preparatory work is begun in the Grammar School.

No. 57.

[A Massachusetts city Latin School.]

The more advanced, or literary, side of composition writing however was greatly neglected. I remember distinctly receiving the highest mark possible for a piece of work the only value of which

was that its punctuation, paragraphs, spelling etc, were without errors, while the style was forced and unnatural, the wording conventional and the arrangement stereotyped. That my work had these latter faults I did not realize at the time for I had not been taught to avoid them. It seems to me that the laws of "good use" and the other parts of rhetoric which "English A" took up in Freshman year should have been taught at school for I was as capable of understanding them then as a year later. Moreover a fault corrected early is more readily forgotten than if allowed to take deep root.

No. 58.

[A Massachusetts city Latin School.]

The great weakness of the English training at the Latin School was its hastiness. Mr. —, whom I have mentioned above spent most of his time upon Latin, and although he insisted upon decent English in translations, he could do little more than frown upon positive blunders.

Like nearly everyone else, I have my opinion of what ought to be done for ante-collegiate training in English. The press of work in the Latin School, where English got all of the very slight attention that could be spared from the weightier matters of preparation, absolutely prevented any thorough work in English composition. No more time could well have been spared from other studies to English, and I feel that the teachers did about all that could be done in insisting upon careful translation. The trouble seems to me to lie in making English count for so little in the admission examination. After all, young men go to school to pass the college examinations, and if English composition counts for one sixteenth of the required preparation, it must not expect to get a quarter of the students attention, — and it *must* get something like that quarter if it is to be what the Harvard Faculty demands of it.

No. 59.

[A Radcliffe College student.]

When in the course of human events it became necessary for me to study my native language, my eldest sister began the arduous task of drilling into my unwilling mind the first principles of English grammar.

Now, according to my sister's ideas, children ought not to be given homeopathic doses of anything; this would, of course include English grammar, and most rigorously did she carry out her principles in my particular case. I was given large, unsavory doses of English early in the morning, at stated intervals during the day, and an extra allowance for my evening's delectation.

This course of treatment continued, with my mother's sanction, until my life became a burden. But as I grew weary my sister's courage increased. I was given long extracts from Milton's "Paradise Lost" to parse; and even now the sight of Milton's poems sends cold shivers dancing up and down my spinal column.

This system of cramming was carried out in my other studies and, distasteful as it was to me, it had the desired result, for in the course of time I passed my examinations and entered the High School. Here was to begin my real study of English, the foundation for which had been so carefully laid. Here I was to acquire that knowledge, by means of which I should become famous; for so my sister said, and had not her word been law to me? However I found that, whatever else might have been his ambition, the master's aim was not to turn out famous literary men and women.

In many of the shops in our village was displayed the sign: "Ici on parle Francais." In our school, however, it was not necessary to tack up in a conspicuous place the sign "We do not teach English here." It went without saying.

From the first morning I entered High School till the beginning of my last year, the study of English was shunned as if it were an evil thing. Then, according to a time honored custom, there came an awakening which was to our school what the Renaissance was to the Middle Ages.

Following in the footsteps of our predecessors we, members of the senior class, must write compositions, the number not to exceed four, and these compositions were to be read before the school. In the choice of subjects we were allowed a very wide range, but the number of compositions required seemed to us planned with the four seasons in view, so, at least two thirds of all the compositions were written on the seasons in succession, beginning always with "Autumn." When it happened, as it did in my class, that the fourth paper was not required we were sorry we did not begin with "Summer, being perfectly sure we could have written the very best paper on that interesting subject.

These papers were returned to us without mark or comment. This then was my experience in writing English before entering Radcliffe, about nine pages of theme paper, written at intervals of ten weeks, without previous instruction, with no directions in regard to the writing, and no comment upon the work when finished.

If a part of the time that I was required to spend in digging out Greek roots had been devoted to the study of English I should not now be struggling with "English A." That I am doing just that thing seems to me to be a "good and sufficient" proof that my previous English training was very defective.

No. 60.

[A Radcliffe College student.]

I realize now what criticism means and how much I have lost by not having had criticism. My work has always been marked excellent and no particular fault has been found with it. Now when my themes return to me, bespattered with red ink, marked "Frigid," "Conventional," "Wordy," "Not Specific," "Awkard," "Pathetic in its Ineffectuality," I know that my work is not up to the new standard, and I can only set to work in a sort of despair to submit some new effort to pitiless criticism. Of course it is only by cutting

that a tree can hope to bear good fruit, but I suppose it hurts the tree to be cut.

I cannot quite tell what has been inadequate in my training. Perhaps a course in English literature would well take the place of the list of books in the college requirements, for pupils in the so-called "college course" in our preparatory schools know almost no English literature, and in fact little beside the college requirements. Then there should be much more original work, all of which should be subjected to a really good criticism. I think if I had had some such preparation back of me, I should not feel so "pathetic in my ineffectuality."

No. 61.

[A Massachusetts city High School.]

The study of English composition as conducted there was not very thorough although equal to that of the average High School. Monthly exercises were called for which were returned corrected to be rewritten but the corrections as I remember them were more in regard to punctuation, spelling and grammar than to general technique or excellence. The importance given to the subject was not such as it deserved. Regularity of work was called for but the marks given were not regarded as important as in studies like Greek, Latin or the mathematics. They occupied a position as regards their weight in the make up of the monthly "report cards" about midway between the marks of the courses just named and the marks in what is called "deportment." The teachers I had in this branch of study I am utterly unable to recall. The Principal of the High School has made great improvement in the study of English composition especially since so much has been said within the last few years concerning the poor training of the average college undergraduate in this branch of study.

The importance of the study of English composition as a fine art is wholly misunderstood. We study literature as we study the works of Greek art or of the period of the Renaissance. The study of composition goes a step further. The study of literature is helpful to the one who wishes to master composition but in composition we apply our own hand to the marble and the brush. If proper attention were given to it, it might become our great national art of expression. Before it can ever become so however, it will have to be considered not of secondary but of primary importance in elementary education. The Greeks would not have attained so perfect a literary expression if they had devoted less attention to their own language than to Assyrian or Egyptian but that is practically, in principle, what we are doing.

No. 62.

I prepared for College at a private school in Boston, where I studied for six years. In all these six years I had only two years' training in English. The year I entered the School I studied the English grammar. The name of this book I have forgotten, but I can distinctly

remember its appearance. It was a book about three-quarters of an inch thick, six inches long and four inches wide, bound in a reddish brown cover, and the edges of the leaves were colored a bright red. From that year until my last year at school, that is, during a period of four years, I received no instruction whatever in English.

During my last year at school I prepared for the entrance examination in English. The preparation consisted in reading the required books, and writing a two to four page theme once a week, on some subject taken from the prescribed books. The only purpose of this composition work, was to enable me to pass the examination in Entrance English, which I did, with a *D*. This then was the only preparation and experience I had in writing English before I came to College.

During my Freshman year I took English *A*, I took English *B* my Sophomore year and English *C* last year. How well I remember my literary struggle and seemingly vain efforts of my Freshman year. How I blamed my preparatory school for not giving me a better grounding in English. It seemed sometimes as if it were impossible for me to write good English. At the midyear I received a *D*. The second half-year was somewhat more encouraging. I seemed to have more facility in writing English and I think I must have continued to improve up to the end, for I received a "*C*" for the whole course. The next year, by dint of steady hard work I got a *C* in English *B*, and last year I got a *C* + in English *C*.

I think the whole reason why I have not done better in English composition at College, is on account of my training at school. One year of English Composition before entering College seems to me totally inadequate. How can a fellow who has had so little experience in writing English, be expected to write well when he comes to college? I think the course of English composition at preparatory schools should be increased so as to include the English *A* of Harvard. If that were done by a good course, of say three years' duration, a fellow would enter college well grounded in the principles of Rhetoric and English Composition, whereas now, the majority of the fellows who enter Harvard have no idea whatever of these principles.

But until the requirements in admission English are arbitrarily raised so as to include the present course English *A*, and thus compel the preparatory schools to furnish the required preparation, those schools will continue to send fellows to college who know just enough English to "scrape through" the present examination in entrance English.

No. 63.

[A private School, New York City.]

In the light of my college experience I should say that what my preparatory training in English should have given me, but did not give, was a reasonable amount of fluency in expressing myself on subjects wholly within my knowledge and understanding. This was due, I think, mainly to a lack of practice in writing. In grammar and spelling I was, on the whole, adequately drilled, but of systematic

training in the writing of English I had little or none. The isolated compositions required were a considerable tax on my mental powers, but helped me little to express myself in writing. The subjects were, as a rule, far too ambitious and difficult of treatment. It may be that I had a tendency (which, however, should have been suppressed) of choosing the most difficult out of a long list of alternatives.

Why could we not have had simple subjects, chosen mainly from our other subjects, or from daily life, definitely assigned to us at frequent and regular intervals, say once every week? This would have given us fluency of expression, without requiring spasmodic efforts of a superhuman kind. Why could not our English teachers have adhered to the simple principle that the scholar should be taught to express what he already knows well, in good English, rather than to be forced to express what he knows ill in bad English?

No. 64.

[A New York city private School and Massachusetts Academy.]

The trouble with all preparatory training that I have ever heard of was that it made out of that study which should be the most direct, the least complex—the art of self-expression, an affair of heavy topics childishly discussed, of attempts at grown up thought and modes of expression, of dictionaries and daubed fingers.

They were moreover, too long and too infrequent. The boy has nothing to say at length, and the boy becomes a prig if forced to. But he is sure to see things, and may be counted on to do it. The only possible training that it seems to me would do us any good at that time, is, either a daily theme sort of thing—a résumé of a recitation, or of the walk to school—prescribed before hand, short, never rewritten, and if bad, read before the class; or the transcribing from dictation of standard prose. This latter would be death to half the boys but for those few who knew or were going to know, the great method.

My subsequent training has shown me that I am completely lacking in any coherence or even sequence in my ideas. If the place that took up all my working, and the best hours of the day, my school, had given me any outlet for what ideas I had, for the things that I wanted to talk about but never did for want of time at home and opportunity at school, if the school, I say, had made me write one firm sentence a day I should not have come up here in a state in which you cannot tell the bubblings from the soup.

No. 65.

The training I received in writing English preparatory to entering college was so brief as to leave but a very indistinct remembrance of it in my mind. As I look back [the master of the private school in Boston, from which] I entered, seemed to have had the idea that, all of his scholars being gentlemen, they knew the King's English. All his methods of teaching were founded on the very attractive, though

necessarily loose, principle of common sense and subs and bases were left to the winds. The obligation he especially urged upon us was to make the English translation of any other tongue straightforward, clear and grammatical. This of course gave us considerable practice, although I realize now that we were working blindly. Beyond this daily practice, I do not remember that the art of writing English was seriously considered until the last half year preceding our graduation. In this I may be unjust; but it is my impression and that of my two roommates who graduated in my class. A Miss — was the teacher who assisted us in composition. The greater part of her time was given to a part of the class who were trying to pass English *A* as well as the admission examinations. Three times a week, however, she gave an hour to the regular class. “Hill’s Rhetoric” was the text book used. Short themes were required once a week upon specified subjects as well as upon books we were supposed to have read. Much attention was given to correcting sentences given to us for that purpose. With this slight preparation, the only experience any of us had in English composition, the greater part of the class passed well. With these scant facts, though salient and true in general, my efforts at reminiscence must be satisfied.

Speaking in the light of my subsequent work and experience in college, I should say that such a training as I received was lamentably insufficient. It may be true that Mr. — views as I interpret them, were right, that all his scholars were gentlemen born and bred, and as such ought to know their native tongue well enough to speak it without committing Barbarisms, Solecisms or Improperities; it may be true that the omnipresent principle of Common Sense was well enough to follow for educated minds; yet it is equally true that this same principle cannot be useful save to those who have a good foundation to work on, and that gentlemen born may be quite as much at a loss when it comes to more lengthy matters than those met with in ordinary conversation, as the veriest tramp. In other words, no man can be a master until he has been a workman.

English 12, my first course in College which treated solely of composition, was, in vulgar terms, an “eye-opener.” I had never considered literature in the light in which this course presented it to me. Before, I had believed composition an application of the principle of Common Sense to thought, and in the writing done purely for amusement, I was at a loss to explain where my weakness lay. What English 12 has done is to analyze this principle of Common Sense, true in generalities, but unfathomable to superficial minds, and give me formula by which I can tabulate my thoughts, and from which I can trace my mistakes. The whole matter seems to be simply a question of Science and Art. The science of English composition is an analytical knowledge of the English language. The art of writing is the product of that knowledge in the hand of a genius. From this it seems that a knowledge of the rudiments of composition ought to be in the hands of every student, whatever may be his final disposition of it. It is this intimate knowledge that, until now, I, for one, have sadly lacked.

[A Massachusetts city Latin School.]

In my second year [1890] at this school, work was commenced irregularly and half listlessly on the books prescribed for admission to Harvard. Here again too much time was spent in memorizing portions of Tennyson's "Locksley Hall" and Wordsworth's "Intimations of Immortality" and Macaulay's Horatio. But little writing of compositions or essays was done and that only irregularly. The translations made in class were rarely put to the test of good English — one of the greatest encouragements to bad English that I know of.

During the last two years in the school proper justice could not be done to English, as sufficient time was not given to it. Where Latin and Greek were studied five times a week, English was studied but twice. Though the amount of writing was increased somewhat, it was not sufficient to give continued practice. The writing which was done did not leave room enough for original thought by the student.

The results of the entrance examinations taken by the class show I believe the direction which reform should take here. Almost every member of the class received honors in Greek and there were no failures. In Latin there were a great number of honors and but few failures. In English however there were no honors and more failures than on any other subject. This shows beyond a doubt I believe, that the amount of time and attention given to the subjects offered is not evenly enough divided.

It was not so much the want of method, as the want of time and attention which caused this deficiency in English.

Speaking for [the private school in Boston where I was prepared], I think I may safely say that the training in English was entirely superficial and insufficient. Had as much time been given to English as to Latin or even to French or German, I feel convinced that the graduates would have known enough to write decent English, that is, English fairly free from grammatical mistakes.

To me, the remedy seems to lie with the English department at Harvard. If the entrance examination was enlarged to two hours and made so stiff that at least two years training in English was absolutely necessary to pass it, I am convinced that in a few years English *A* could be abolished. The University is now teaching the rudiments of *English* alone, to a horde of freshmen. Why should she allow the preparatory schools to impose this burden on her? The newcomer know the rudiments, at least, of the other languages. And Harvard overseers hold up our English to ridicule and ask why? Do they expect preparatory schools to teach English without incentive? How foolish!

My English training before coming to Harvard, I may say at the outset, consisted more of a dilatory study of English literature than any training in English composition. The schools that I went to all seemed to start with the basal idea that to study English meant to study English literature; composition was deemed a very secondary part of English training. In fact, in the majority of cases, I may say that I seriously doubt if my English teachers were capable of giving any instruction of real value in English composition. Many of them did not even know how to write well or even correctly; if they did, it was more the result of good native instincts or some accident than that they really knew from training in the subject, what correct writing was.

Naturally, teachers of this sort, went largely on the theory that after their pupils had learned to spell, to punctuate and to avoid the most flagrant grammatical errors, the rest must be left to the pupils themselves. The only additional help they thought of giving was to give the pupils a chance to acquire a certain fluency of expression and glibness of treatment, by making them write "compositions" and "essays" on various conventional subjects. After this they thought their duty was done. They never criticized the aforesaid compositions with anything approaching thoroughness. Comment was entirely general; where it was specific it was only with regard to the most obvious errors, such as any newspaper correspondent knows enough to avoid.

In fact, I think most of my English instructors had very little idea that there is a correct way of writing, which must in the main be followed or else, no matter how brilliant the spirit of the work, the writing will technically be wrong. They realized that there was a correct way of spelling, a correct way of punctuation, even a correct way of paragraphing. In general, they understood the principle of unity when applied to a whole piece of work, in that they were able to tell when the general result was effective. But that there were rules and more or less arbitrary methods by which all pieces of work, no matter how mediocre the theme, can be raised to a maximum degree of effectiveness, both in part and in whole, they usually did not realize. They thought good writing was entirely a question of the person who did it. They believed it required talent, the spark of genius or what not, to write well just as we believe it requires the spark of genius to write brilliantly or originally. That writing well is a question of training they did not understand. They would undoubtedly have admitted that training is a help but had somebody suggested that any intelligent person can write correctly and well if properly trained, they would have said, "Ah, my dear sir, it depends upon the man."

With what they called "English literature," it was different. Here they thought anybody could be made to learn anything. Here it was merely a question of application, a question of opportunity. Anybody can learn facts they thought. So we were set to work learning literature from text-books. In other words, the correct process was exactly reversed. Instead of letting us imbibe our

literature naturally from the authors themselves, they tried to pound it into us. On the other hand, instead of pounding into us the rules for correct English composition, they thought to let us imbibe them from the air and the fields and what not. To sum it all up, I never received any training in composition, beyond the most elementary sort, that was worth a straw; and I never was encouraged to any study of literature that was worth a straw until my last year at [a New England Academy], when I was obliged to read the list of books that were put down for the Harvard entrance English.

Now the point I wish to make is this. The primary fault with all preparatory school English training is with the teachers themselves. When they in general don't know how to write correctly themselves, how can they be expected to train others to write well? Now any remedy, in order to cure the condition of preparatory English must obviously strike directly at the root of the matter. It must strike directly at the men who teach English in preparatory schools. But how can this be done? As a matter of fact, it is my solemn opinion from what I have observed, that Harvard is the only college in the country that regularly and consistently turns out men who know how to write English. Men from Amherst and Yale and other places may happen to know how to write but if they do it is an accident. In most cases they do not. Many of them are well-versed in literature and get positions as English instructors on that ground without knowing anything at all about composition. The only instructor at my preparatory school who knew anything about English composition was a Harvard man and he was teaching Greek.

Now Harvard may go on appointing investigating committees and raising entrance standards and passing regulations, but what good will all this do when the teachers at preparatory schools do not even intelligently understand what Harvard is after? They don't understand the principles of good writing; how will any of these means make them capable of doing teaching which primarily rests upon the existence of such knowledge.

The case is hopeless. Harvard can't compel the preparatory schools to put Harvard men over their English departments. As far as I can see Harvard is simply obliged to wait until the graduates of other colleges know something about English or until her own prestige in English is so great that preparatory schools will take only Harvard men for English instructors. Until that time it is deliberately unfair to the great body of schools, to radically raise the standard for entrance examinations in English.

So that most excellent course, English A, cannot justly be said to be doing work which can reasonably be expected of preparatory schools. Harvard will have to keep it up indefinitely in order to prepare her men adequately for the really literary work done in English 22.

THE INCIDENTAL METHOD.

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No. 69.

In the [Latin School of the Massachusetts city where I prepared], we were required every three or four weeks to write themes of between six hundred and a thousand words. Various subjects were suggested by the instructor, but my recollection is that we usually wrote on subjects connected with the books, read in preparation for the college examinations. These themes were read aloud before the class; and by devoting two or three days to this reading, each one of us was generally given a chance to read his theme. Then, the rest of us proceeded to criticize it. This oral criticism was very informal and was allowed the widest range. We noted any grammatical or rhetorical mistakes, we criticized violations of the principles of composition, we discussed the method of treating the subject and the qualities of style, and sometimes we discussed the writer's opinions. The instructor in turn criticized our criticisms; and after we had finished, gave his estimate of the theme and suggested ways in which it could be improved. After receiving this oral criticism, we re-wrote our themes, and they were corrected and commented upon by the instructor, and returned to us. In many cases, they were then rewritten a second time; in every case the criticism was thorough and helpful.

In addition to this regular work, we frequently wrote impromptu themes during the recitation-hour, and occasionally criticisms of each other's themes. Besides such work under the direction of the instructor in English, we received a good deal of training in writing English from the instructors in the other departments. We were trained to translate foreign languages into readable English, and failures to write idiomatic English were marked as severely as misinterpretations of the Greek and Latin. Even in Geometry, we received a good deal of instruction in writing through the emphasis placed on clear and definite statement. Every instructor, in short, paid careful attention to the student's English.

The general nature of this training in composition, I thought then and think now, was admirable. The practice of having the themes read aloud and criticised by the class, seems to me particularly beneficial. We all enjoyed it, and, I think, learnt more of the practical rules of rhetoric and received more insight into the methods of composition than we would if the time had been spent upon a text-book. Apart from the consideration of specific mistakes, general questions of method were continually arising, the discussion of which was certainly of great value. This oral criticism, above all, encouraged in the student that most desirable trait, alertness of mind.

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The care taken with the English of our translations was of almost as much service as the writing of regular themes. I don't know how the instruction in this respect could have been improved unless by the radical method of lessening the amount of Greek and Latin studied and the substitution of English authors.

Finally, I ought, perhaps, to speak of the benefit our study of the English classics must have had on our writing. We were not taught to write in imitation of Macaulay or Addison or any other English writer, but in reading the great prose-writers we were taught to notice the methods and qualities of their styles. Without going into the details of such instruction, I can best state its result, and indeed a very important benefit of our training, by saying that many of us came to feel that even in our simple themes, we were practicing at a noble art.

To encourage this literary sense and utterly to discountenance the ordinary school-boy's slovenly writing were perhaps the chief aims of teachers.

No. 70.

[At the private school in] Cambridge, on the contrary, where I studied (1892 and 1893) the two years previous to entering College, English was taught as one of the most important subjects and was applied to all the others. Our instructor in English and in Latin, not only strove to make us write our translations of Vergil and Cicero in good and idiomatic English, but arranged with other teachers that a similar effort should be made in written translations from the Greek, the German, and the French. Our papers in History, too, were criticised not less for their style than for their substance.

The first of those two years we studied Longman's "School Composition," and read the "DeCoverley Papers," reproducing these from memory in the class room. Mr. — corrected each theme in detail and discussed it personally with the pupil.

My last year at school, we took up Professor Hill's "Principles of Rhetoric" and went through the book so carefully that English *A*, in College, proved an easy review. At the same time, we read the books set by Harvard College (in Emerson, Irving, Dickens, Scott, Shakspere) and reproduced sections of them as Mr. — directed. He was severe in his criticisms, and brought me down to earth with a shock more than once when I was inclined to soar. I did not like this treatment very well at the time (though I always thought his judgment keen and appreciative) but I believe I have felt the good of it ever since. Mr. — was very thorough, also, in matters of technic, and he tried constantly to teach us simplicity, directness, and accuracy of expression. For this purpose, he made us write, and rewrite, continually, both on the set of books that we were reading and on the principles of Rhetoric.

The three years before entering college I spent in [a California city] High School, (or Boys' High School, as it used to be called), whose course of instruction followed the requirements of admission to the University of California. These requirements were English 1, or "The English Language," and English 14, or "English Literature."

In describing the work of these three years, I shall speak first of the English which was *not* writing, for that which *was* writing is closely connected with it. That work, then, was of two kinds, the study of the Literature, and the study of the Language. In the latter, which was the less important, several poems (Evangeline etc.), were taken, when we started in, as materials for the study of the sentence and of words, their analysis, use, and so forth.

The most important element of all the work, however, was the study of poetry and prose as pieces of English Literature. Work corresponding to English 28 took up part of the time, while such books as the "Alhambra," "The Newcomes" Macaulay's "Warren Hastings," took up what was left. Much outside work was required, several of Thackeray's and Scott's novels, DeQuincey's Essays, and others being on the list of required readings.

This, then, is a sketch of the work in English that was *not* writing. Of such theme work as is required at Harvard I do not remember any. However, a good deal of writing was required in connection with what I have described above. For example, written analyses of scenes of Shakespeare's plays or discussion of chapters of the Newcomes, were frequently called for. At such times a choice of several subjects was allowed.

Outside of English, written work was required in Government, (corresponding to Government 1), History (corresponding to History 1), and in the classics, of which I took only Latin. In translating this, good English was always insisted upon. In Government and in History, papers of considerable length were frequently called for. They were, however never revised as pieces of English Composition.

Letter-writing has been the only experience in composition I have had outside of school work.

Looking back now, I think the training I received in writing English was exceedingly good, but insufficient. It might well have been extended at the expense of some of the other work. In the light of my study in College since, I think increased composition should have almost entirely supplanted the work in Rhetoric, for, having gone over that for the second time, in English A, I feel convinced that it is as useless to a person learning how to write as the study of logic is to a growing child, learning how to think. What both need is good example, and in this respect I feel that my training in English was not only good, but sufficient. The defect seems to have lain in a lack of sufficient *practice in following* the examples.

No. 72.

[A Massachusetts city High School.]

The subject of my preparation in writing English would, I think, separate itself into two divisions; the principle or direct training in English composition by theme writing and in Literature classes; and the secondary or indirect, the criticism of our English in the translation of the classics. Of this later class I shall first speak.

My work in Greek and Latin was on the whole valuable as training in English with the exception of my Junior year. In the work of that year, the chief aim seemed to be to dig out the Greek and Latin with but little real regard for the English. In my senior year, however, the work was conducted along the lines of good English. In Latin especially, a clear idiomatic translation was required, even, as I sometimes felt with too little regard for the literal meaning. In Greek, the stress was perhaps less marked but still of value. Our papers were marked from the standpoint of good English as well as the literal Greek meanings. As a whole, then it seems to me, that with the exception of my Junior year, the use of clear, idiomatic English in our translation work was made an important and useful part of our training.

In our direct training in English composition; that is in our theme writing, our course was a miserable failure. In the first year we wrote a few themes, not more than once a month. These came back with the glaring mistakes in grammar, punctuation and spelling marked. The style, however, was never commented upon; there was no regular or required time for talking over the work; occasionally the themes were not returned. Our work in the second year was carried on in much the same way; a few themes were handed in which were returned or not as it happened but which were never really criticized.

No. 73.

[A Philadelphia Academy.]

Most of the students went directly to college but I chose to stay at school for two more years before entering Harvard.

The first of these two extra years I did no regular work in English composition spending all my time on studies I was preparing for my preliminary examination in June. We were always required to write our translations in as good English as possible but the putting of Latin or Greek into good English and at the same time the showing the teacher by a fairly literal rendering of the text that I had some knowledge of what was in the text always bothered me. In choosing between good English and a word for word translation I was very likely to prefer the latter as showing that I at least understood the words I was translating.

No. 74.

[A private School in New York City.]

Our themes were sometimes on our own, sometimes on required subjects. During some years they were written in class, during others at home. In all cases these themes were corrected and usually rewritten. The best were frequently read in class and commented upon by the instructor. From time to time, he would give us little talks on the art of writing. Every now and then, the composition work was varied by debates and oral discussions of different topics.

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In translations from the classics and from the modern languages great stress was always laid upon the use of good idiomatic English, keeping as close to the text as possible. The translations, usually oral, were sometimes written.

Close, yet literal translation of the classics and the modern languages seems to me an excellent method to increase one's vocabulary and facility of sentence structure. Indeed, I think nothing is of such benefit in enabling one to handle the language without any difficulty.

No. 75.

[An Academy in New Hampshire.]

I was also greatly helped by Profs. — and — of the Latin and the Greek departments, respectively, both of whom took great pains to give their classes frequent exercises in writing translations with especial attention to the English used.

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In one respect, I notice a conspicuous difference between the method used by Prof. — and that of English 22. In teaching us to cultivate a style in writing, he did not continually harp on the advantages of imitating a certain author or authors, but urged us to notice carefully the style of every author that we read and to strive to combine the good qualities of as many of them as possible.

No. 76.

[A private School in New York City.]

Less classics, and more logical mathematics, would tend to lay more stress on English branches, and to get rid of classical phrasing. More frequent, but not daily themes would be practical, and beneficial. These should be written at home, criticised, and rewritten in class. The English department should require, as was seldom done with us, instead of themes very frequent translations from Greek, Latin, German and French, and paraphrases of English, the entire attention to be given to the form of English.

In 1890, when I went to [an Academy in Massachusetts], the English course was considered an important one, though there was really no very great stress laid upon it. At that time, the custom of having translations of all kinds rendered into good English, had not yet sprung up.

During 1893 and 1894, we read Shakespeare's plays, with a good deal of care, but, though we wrote many compositions upon these plays, the english we used was not very vigorously critisized. Our latin translations were still hideous to read. All the words used were taken directly from the latin ones and a small vocabulary was the inevitable result.

It was not until 1895, that any effectual system of teaching English was introduced into the school. From this time on, all translations, both verbal and written, were required to be rendered into good, pure English. This was a great assistance in acquiring a larger vocabulary. But besides all this we had a regular English course. We studied the old edition of Hill's "Principles of Rhetoric" as far as "Argument." We wrote themes on the books required for preliminary English at Harvard. These themes were re-written with special care for the critisisms. Again this was a step better than the work of the year before and the next year's progress proved to be greater still.

In the 1896 term, our English instructor [a recent Harvard graduate] taught me a great deal about writing English. The class studied the new edition of Hill's "Rhetoric" in a very systematic manner. Our fortnightly themes were carefully corrected with reference to the "Rhetoric," and, after being discussed, were re-written. We had lectures on the 18th century authors and each member of the class wrote an essay, describing the lives and works of the men. We read the books required to anticipate English A and critisized them in our themes which in their turn were critisized.

This last year of my school training in English did me more good than all the former years work put together for I had begun to look up the writing of English as an interesting study and not as mere drudgery.

In the fall of '96 I entered Harvard. As I had satisfactorily passed the English A examination, I took English 22 as my English course.

In the second class, we analyzed very carefully certain plays of Shakespere. Essays were required from us concerning the different characters of a play; and for a certain time tri-weekly bits of prose were called for, which corresponds somewhat to the English 22 "daily." Contemporary prose authors were also recommended to us.

In my last year more careful analyzation of Shakespere and Milton was called for. We were asked for criticisms and reviews of books we were supposed to have read. The early method of black-board work was still continued; sentences containing solecisms and barbarities were put on the board to be picked apart by the class.

Besides the strictly English work we did, we were aided, or rather driven, into correct English by the other teachers, noticeably Mr. —, our Greek instructor. These gentlemen would not allow us to present "translation English" in their several courses; they insisted on a good English version of whatever language we were studying.

I have very little criticism to offer against the School. I think the command one partly acquires, who graduates from this school, proves its efficiency. I think I developed there a taste for literature. The constant reading the school requires, and later, the analysis and dissections of various authors and plots, helps one greatly.

I think, however, the efficiency of such a course might be increased. Raise the standard of English required to enter the — Latin School, by some stress on the importance of English in the grammar school.

One is, as I have said before, supposed to be able to write a short piece, to spell ordinary words and to read simple English. Now every boy that passes into this school cannot write a short piece correctly, nor spell ordinary words in the right way. So the first year or two is spent in mere technical matters, and literary style must be neglected till a command over grammar is acquired. If entering scholars were up to the standard the first year might be given over to laying the foundation of literary appreciation, and one might graduate from the — Latin School with nearly as complete a knowledge of English as the newly-made sophomore at Harvard possesses.

No. 79.

Our work in writing English in the Latin School [near Boston] was excellent as far as it went, but it seems to me now that we should have gained greater facility in writing if we had had more practice. The work of writing compositions of some length, out of school is rarely popular with the students, and I doubt if it would be advisable to require them much oftener than once a month, especially in the lower classes of the preparatory schools, but I am very sure that much good would come from the introduction of a system of short themes to be written in class in a limited time. They might be written, weekly, semiweekly, or daily, (the oftener, the better). The subjects might be given out the day before to be considered and looked up, and thus, by the judicious selection of subjects, a considerable fund of general knowledge would be gained; or the fellows might be required to write on a subject "impromptu," or upon anything they chose. These themes would correspond closely to the English *A* weekly themes. If such a system as this would not improve the quality of the English presented at the entrance examination for Harvard, it seems to me it is doubtful if anything would; it would moreover sharpen the fellows wits and teach them to think quickly and to express their thoughts. This system might also be adopted in part, by the upper grades of the grammar schools.

In translation there is often the difficulty of translating literally enough to suit the teacher and at the same time write good English. Translations in poor English were always severely criticised, though I doubt if poor English, excepting in a few special cases, ever mate-

rially lowered the writer's mark either in English or in the other language.

Much good might be done by requiring translations to be written in good English, and by severely marking down all poor English translations.

No. 80.

After leaving the public school, I entered a school of which Mr. — is Head Master, in Chicago.

Then began the direct work of preparation for college examinations. This was done under the care of Miss —. The work now became more systematic. The books required for the examination of 1895 were taken up in order and carefully read and reviewed. With each book, according to its nature, the development of the plot, the portrayal of character, the historical bearing or the beauties of the diction, were brought out in class-room discussion. At least once a week, we wrote for twenty minutes on some point in the reading. The papers were corrected and we rewrote occasionally but more often merely recast them. At intervals we wrote on what we pleased but always briefly and in classroom. During the last year, we also had considerable drill in technique intended rather to help us avoid solecisms than to acquire any knowledge of the principles of different kinds of writing.

At the same time with this direct instruction in English, we were made to use good English in our translations from Latin and Greek. Written translations, especially, were not accepted unless they were phrased in correct language and in our oral work, every effort was made to prevent us from falling into the Latin or Greek idioms and we were constantly encouraged to find the best English idiom rather than make a less idiomatic but more literal rendering.

Looking back over the last few years, in the light of later experience, I can say that the preparatory training that I received, brought me most successfully to a point where I could take up the work of English *A* with ease. If I were to attempt to criticise the preparation it would be in details rather than as a whole. The aim of the College requirements in English seems to be two-fold: first, to give the candidate a fairly thorough acquaintance with eight or ten pieces of good literature; and second, to give him the ability to write correctly, at least, short compositions. Now, with these objects in view, a different choice of books seems to me advisable. Within the last few years, Webster's "First Bunker Hill Oration," Macaulay's essays on Chatham, Clive and Hastings, Emerson's essay on "the American Scholar," and Arnold's "Sohrab and Rustum" have been among the requirements. These works, with the exception of the last, in order to be read intelligently require a great deal of outside study. Macaulay's essays cannot be grasped and remembered without a minute study of the period of history which they treat; the "American Scholar," involves a study of Transcendentalism; Webster's oration comes nearer home to the average schoolboy but even that needs some outside work of a historical nature. Sohrab and Rustum is open to objection of another kind. While there are plays of Shakespeare, poems of Tennyson, Shelley and others, and novels

of Thackeray and the other masters, that the preparatory student does not know and ignorance of which is a crime against literature, he should not be made to put time on the study of a comparatively unimportant writer like Arnold. In place of those works which require outside historical work, I should like to see substituted more plays of Shakespeare, or more novels of Dickens, Hawthorne, Scott or Thackeray, or something of Goldsmith or Pope, the "Vicar" or the "Rape of the Lock," for instance. In this way, the labor of the reading might be materially reduced and more time given to the acquirement of technical skill in writing while at the same time the general knowledge of the common body of our literature with which everybody is supposed to be acquainted would be considerably increased.

No. 81.

I prepared for college in a public Latin School [near Boston]. The English work in that school has been revolutionized since I graduated. As it was then conducted, it seems to me its chief defect, on the side of literature, consisted in the limited amount of the work required. We had to read only the books required by the College, and the instruction in them, so far as I remembered, was designed simply to acquire a certain general knowledge of the characters of a certain book, and the general plot of the story or play, and was not designed to awaken in interest in the methods of the given author, or the influences which had produced his style or the influence which he may have exercised upon his successors. The work was done by the teachers as required work, in which they were not much interested and for which they were not prepared.

In the School much attention was paid to translations from Greek and Latin. We were continually urged to put the thought of the ancient into idiomatic English. I think this was a far more valuable exercise than that of writing essays on English books. The work consisted in avoiding certain evils of grammar and rhetoric. We were not guided in imaginative work, nor indeed in any of the particular kinds of writing. No effort was made for purity of thought in the various well defined kinds of writing. We were not taught to distinguish sharply between description and narration, nor were any suggestions offered which would tend to awaken perception of the "litteresque." The criticisms were, however, always sympathetic. The teachers tried to look at the subject treated in an essay from the point of view of the pupil, and did not make use of ridicule as a means for arousing interest in the work, nor as a correction for mistakes common to all young writers.

My first theme in College, written wholly without preparation, was marked *A*, a mark with which, so far as I know, no succeeding theme has ever been decorated. Writing is one of the fine arts, and it is natural that certain schools should prevail at certain times, and should predominate in the minds of certain teachers. As near as I can make out, success in theme writing depends on imitating the artist who is the recognized master of the instructor who reads the themes.

I have been requested to describe my training in writing English before I entered College. By the training in "writing English" I take it to mean not only the themes and compositions I have written for my courses in English, but in addition the translations that I have made from other languages.

This is rendered the easier for me by the fact that all my preparatory work was carried on in a single institution in Chicago. Let me speak first of my English courses proper.

During almost my whole course of study I was under the instruction of Harvard graduates. They were all fresh from their work here, and followed its methods for the most part. Every week, and sometimes oftener, we were required to write a resume of the book we were reading, an account of the author's life, to describe some event in it, or to give our impressions of the writer's style. One year, under Mr. —, we wrote a series of daily themes, much on the same plan as we employ in English 22. And in my last year we were required to take notes on a course of lectures which was being delivered before the school, and these were handed to the instructor and criticized by him.

Probably no less important than this composition training was the practice we received in translation. Both in oral and written work we were required to use idiomatic English, and to avoid the Latin and Greek construction. Even on our examination papers the style of the translation was taken into account. This was also true in French and German although not to such a degree. For we did very little written work in these, and it is much harder to make a good oral translation than one on paper. Even in our geometry our speech was taken into account. We were required to speak without hesitation, to be clear and concise.

In governing the preparatory school work, it seems to me the colleges have made one great mistake. They have required too much reading. I know that my school gave an extra amount of time to English, and yet we did not get the training in composition we should have gotten. With the number of subjects a student has to take up in order to enter college, and the number of books he has to read for English, it is inevitable that he must neglect his composition work,—the subject which will be of the most value to him in his after life.

The way to remedy this fault seems to me to be this,—to cut down the number of books required, and to raise the standard of writing. This has one flaw, namely that the students do not get a grasp of the best authors and poets. But this could be remedied by making a course in literature required,—say English 28.

This seems to me the one great thing that was lacking in my preparatory training,—a great amount of composition work.—Could this higher standard be established I think the Universities would find the students in a much better condition to derive benefit from their work. The study of a rhetoric should be entirely unnecessary in College.

[A private School in Boston.]

In the regular English courses of these two years the only things which I can now remember to have gained were an acquaintance with the books and lives of a few American authors and a slight knowledge of rhetoric. Beyond the regular English courses however, I received some indirect training from the translation of the classics. In these the extent to which good English was demanded varied. In recitations literalness was expected rather than smooth idiomatic English, but in examinations good English was more explicitly demanded. The habit of translating in stiff unidiomatic English in recitations became too strong to be counteracted by the occasional influence of examinations. Still I think my vocabulary was greatly strengthened during those two years by this translation even if I did not gain a proficiency in writing good sentences.

Our compositions were returned to us but we were not required to rewrite them or to look them over with the instructor, so that we soon became so slovenly in style that the habit could not be shaken off when in the following year a new instructor tried to raise the standard of English. In this year's course, then, there was almost no drill in writing good English, but what we did learn was a very thorough knowledge of the books given us for our year's work. The number of compositions that we wrote that year must however have given us some proficiency in putting on paper an outline of a story or of a character.

During this year our work in the classics must have helped us in some measure by adding to our stock of words but the tendency to use a stiff stereotype expression rather than hunt about for a free idiomatic phrase was very strong, and, though the standard of English was raised in translations the daily work in the class showed little sign of the change. The idea of striving always in translation to find exactly the right word was not brought forward as it should have been. If it had been I should have gained a knowledge and an appreciation of words which I now feel I sadly lack.

As a class I think we were well prepared in a knowledge of the subject matter required for the examinations, but we had very little proficiency in writing good English. The fault lay in the fact that we were never obliged to rewrite our compositions when they were returned to us by the instructors. We simply looked over the corrections that they made and then laid the composition away without another thought.

[A Chicago School.]

I might here mention another kind of work which might be considered a part of our English training. Once a week we were required by our instructor in Latin or Greek to make a written translation of some given passage from Homer or Virgil. These, after

they were examined by him, were taken to the English instructor, who went over them with us personally, and marked them as part of our English work. This drilling was of great help to us later, in the examinations.

We have now only to consider the original written work which was required of us. For a period of six weeks in the fall, and again for six weeks in the spring we wrote daily themes.

Besides these we had sometimes longer themes to prepare, coming perhaps every fortnight on an average. These were much like our "fortnightlies" of English 22 in substance, though much shorter and on prescribed subjects. We sometimes, too, wrote short themes in class on subjects given by the instructor, which were afterwards read and corrected by other scholars and handed in, with their names.

No. 85.

[A St. Louis School.]

The course in the senior year was practically the same as the year before. Excepting that during the last half of the year we quit the discussions at the beginning of each recitation and instead wrote short themes. In addition to six essays, each student had to write a graduation thesis. The best six theses were delivered as orations at our graduation exercises.

This system of English was not a smooth running one when it was first adopted some six or seven years ago. At first it was not considered of much importance that each student should do his work in English as thorough as his Greek, his Latin or his mathematics. And because of this reason we, who were the first to graduate under the new system, are not as well prepared as those who graduated this year or as those who will graduate hereafter. The system now works admirably and English is looked upon as being equally important with the other classics or mathematics, and hereafter all students coming to Harvard from — Academy will have a training in English equal to the best eastern preparatory schools.

No. 86.

Five years before entering college I began my preparation [in a public Latin School near Boston], which was eventually to pass me into Harvard. During my first year I received little or no practice in writing English. The study of English, that year, consisted in reading a few of the books, a knowledge of which I must have five years after. We read as standards, Irving's Sketch Book, Evangeline, and the Lady of the Lake. This work came only once a week, and it was very seldom that we had to write a theme. That year we began the study of Latin, which consisted in translating short sentences from the classics. We translated orally, only being obliged to write the translations when we had an examination.

During the next three years there was practically no work in English. We were obliged, however, to write numerous translations from

the Greek and Latin classics, and one of the instructions accompanying each paper was, that it was to be written in good English. This rule, had it been insisted on, would have done much to increase our facility in writing English, but it was not enforced. I do not mean by that, that our translations were a jumble of meaningless words, but in a great many instances our words were not put together according to the English custom.

The last year in school we gave three hours a week to English. Our work consisted in reading the books that were prescribed in the Harvard Catalogue for admission to College. Each week we wrote a theme, summarizing our reading, or describing some character in a book. That year we wrote our translations from the Latin and Greek, and the use of good English was enforced; if the English was bad, the mark was low.

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This year in English 22 I find the work much different from that of last year, and I think my preparation for the course is very deficient. Now I am requested in my fortnightly themes to describe something, or write a narrative. When I attempt to write on the life around me, I make an utter failure of it. Daily themes seem a bore; to write every day is something my previous work has not fitted me for, so in English 22 I feel I am working under great difficulties.

No. 87.

[A Massachusetts city High School.]

In connection with our study of the classics, we were required to write out in blue book form translations of considerable portions of Cicero's Orations, the Iliad, and the Æneid. Several times, also, we were expected to render short passages into blank verse; these would doubtless have been pronounced melodramatic by the English department of Harvard.

In my English course then, the primary emphasis was placed upon study of what others had written; this is doubtless a vital element in the attainment of proficiency in composition: regarded merely as such, it is, nevertheless, an element of which the ordinary high school boy absorbs but little.

No. 88.

[A Massachusetts city public Latin School.]

Though the class, once in a while, was asked to correct specimens of bad English, this was considered of little value. The main exercise, the class got in writing English, was in weekly examinations in Greek and Latin. In these tests, good English translations, as near the original text as possible, were required. Examinations in geometry, though less frequent helped to improve our English, especially as the teacher required us to say, in our best English, exactly what we meant.

Finding too little practice in composition in school, I began to take private lessons thrice a week. Every lesson, I wrote a short

composition of about fifteen minutes, which, after carefully correcting, [my instructor] returned the next lesson, with detailed explanations for the improvements he desired. He also went over the themes, which I wrote in the Latin School, and criticised them more severely than Mr. —.

As to the merits of the methods of my teachers, there is probably less to say not because methods were poor, but because, when things run smoothly, they attract less attention. The literal translations from Greek and Latin into English and the written work in geometry have, I think, done me much good by enlarging my vocabulary and by forcing me to hunt for exact expressions of my meaning. And, the correcting specimens of bad English — which, if thoroughly done, I consider, invaluable — in addition to affording the same advantages as translations from Greek or Latin, gave me, also, a complete review of grammar and rhetoric and enabled me not only to learn the theory, but enabled me also to see if I had grasped the theory sufficiently to put it into practice. Lastly, I find, that Mr. — method of writing short compositions, without any preparation, increased my ability, more than anything else, to write fluently.

No. 89.

[A Massachusetts city public Latin School.]

In all written translations of foreign languages our English was always taken into account, and on examinations two marks were given, one for the English which we wrote, and one for our knowledge of the subject at hand. We were continually reminded to guard against the so-called "Translation English."

I think the training I received at school helped me very much in regard to my Fortnightly themes, when I have plenty of time to think the subject over before I write. But on the other hand, I think my daily themes would be better if I had had some previous training in writing short extracts. Why can't the English instructor in the preparatory school today give out some subject at the beginning of his recitation hour, and let the scholars write on it for five or ten minutes? If this was done two or three times a week during the student's course in English at school, it would help him a great deal when he came to write the short extracts in English *A* at College, and the daily themes of his Sophomore and Junior years.

No. 90.

My training in English composition before entering college was received in a Latin School [in a city near Boston]. From the lowest grade (sixth class) in the school, the scholars were required to write compositions on various subjects chosen by the teacher. But if anyone wished to write on any particular topic, he might consult the instructor in advance.

Eight or ten compositions were thus written during the year; one or two of which were written in class, on subjects prepared beforehand.

A much-disliked innovation was tried several times during my first and second class years. Twenty-five or thirty lines of Latin would be given us for translation into good idiomatic English. On this work, not only our Latin but also our English mark for the month was based. This scheme excited a storm of criticism and angry remonstrance on the part of the boys, but they were finally convinced that it was a just one.

I think that the only suggestion that I could make to Mr. —, would be that he should try the scheme of short daily themes, for perhaps two months in the year. It might be a good way to have them written in class, allowing perhaps twenty minutes for the process.

No. 91.

[A Massachusetts city High School.]

Although I do not believe in speaking ill of one's preparatory school, I feel urged to speak frankly in this case by the very nature of the composition. Speaking in a general way, I should say that my whole preparatory training in English was of a too elementary nature to produce the best possible results. Although I recognize the great importance of learning to use correct grammar and to punctuate according to set rules, yet, at the same time this is being taught, I think a scholar should be encouraged to express himself clearly, easily, and with force, which was not the case in my preparatory training. I think, too, an immense amount of good would have been gained if I had had practice in daily theme writing.

As for other studies, scarcely any attention was paid to the quality of English used. I thoroughly believe that a scholar should be required to use as good English in translating Latin or Greek, for instance, as would be required on an examination-paper in English. I believe, also, that the quality of English used on a history paper ought to materially affect the grade. In this way, a scholar would soon become accustomed to speaking good English without any effort on his part.

As a final suggestion, I would say that the study of English ought to be made a more important part of preparatory work than it is now. Many teachers seem to think that mastery of the English tongue comes to an English-born person by instinct, and so the subject is pushed aside to make way for Latin, Greek, and other foreign languages.

No. 92.

I may say here that at [the Academy in Massachusetts where I was prepared] the masters were always particular about any written work which was handed in, regardless of the subject. Good English was required, and if work was handed in badly written, it was marked accordingly. *English* translations were also required in class.

[A Massachusetts city public Latin School.]

My preparation in *writing* English was confined mainly to the work done in the two years immediately preceding my entrance to college.

The work done in English composition may be divided into two main parts: first, sight translations from Greek and Latin into English; second, short compositions on books read in the class.

In preparation for the preliminary and final examinations in classics, we wrote, in the second half of each year, translations of from one to two pages in length. A good English and not a literal translation was asked for, though of course more attention was paid by the instructors to a correct interpretation of the Greek and Latin than to a polished English style. Though there was no rewriting, the teachers read aloud some of the best and some of the worst of these exercises, calling attention to *gross* mistakes in English expression as well as to any error of translation. These papers were written once a week.

The compositions written in connection with books read in the classes were, from the point of view of English instruction, more important. In the preliminary year, this work was slight and irregular. If I remember rightly, there were not more than six or eight compositions during the school term. But in the final year, more attention was paid to the subject. Twentyfive themes (roughly one a week) were written and criticised in conference. There was no rewriting.

I have tried to point out, as near as I can remember, what my school training in English was. I am now going to give my own unpretentious estimate of it. About the Greek and Latin translations, little need be said. They served admirably the main purpose for which they were designed, and it is unfair to apply to them the standards of English literary style.

The case of the avowedly English compositions, however, is different. I think it is not too much to say that the methods pursued and the standards held up were about as bad as they could be.

In the first place, compositions of a certain arbitrary length were encouraged. I have had a theme marked down severely for no other reason than that it was not the required two pages in length—in other words, it was not redundant enough. Secondly, the compositions were, with rare exceptions, merely summaries of certain chapters of a book. No formation of ideas, no expression of opinion was encouraged. The clerk who wrote out, in well-spelled words and with the proper number of commas, what somebody else had said, received as high a mark as the scholar who ventured to point out the charm of Addison's style, or the attractiveness of some of his characters. Lastly, the criticisms by the instructor were wholly technical. And the mark (on the scale of ten) was determined by deducting one for each two mistakes in spelling, punctuation, etc. Such a system is, of course, a stone wall to any literary efforts and even to the development of a man's character.

No. 94.

[A New Hampshire Academy.]

During the third and fourth years our class in Greek recited to Professor —, and to him do we owe the preparation in English which has been of most service at Harvard. Professor — insisted on idiomatic translations, and to gain these was in the habit of sending a portion of the class each day to the board, where the lesson was put down in white and black. This I consider to have been a singularly good drill, which helped alike my knowledge of Greek and of English. Moreover, in all our classical work considerable stress was laid on good English translations.

During these three years we hardly knew what theme writing meant; and the themes which we did write were insufficiently corrected. Herein probably lay the greatest defect of the course. If we could have spent a part of the time which was consumed in committing to memory verses, in transferring our thoughts in logical form into written matter, more lasting results would have been attained. Moreover, reading unless it be conducted in an intelligent way, is, in the class room time wasted. For boys to get up week after week only to stumble unintelligently through a paragraph of English is alike to instructor and students, thoroughly tiresome.

No. 95.

[An Academy in Massachusetts.]

In my fifth form year, our time was devoted almost entirely to those subjects in which we had to prepare for the preliminary examinations. Still we read a few of the books which were required in the final English Examinations. On these books we were made to write compositions, which amounted to nothing more than copying down the plot in a brief form. In connection with Latin and Greek, every day we had to write out some translation. In regard to the English construction of this translation they were very strict; it had to be grammatical, as well as accurate in respect to the text. A large proportion of the marking was based upon the excellency of the English.

No. 96.

[An Academy in Massachusetts.]

Besides the "study" of English in school, we were carefully trained in other ways. Twice a week, for the first three years, we wrote historical exercises; and the translations of foreign languages were required to be in good English. Indeed, the last year, if our version of Cicero or Vergil was not very carefully polished, it was not accepted for a moment.

[A city High School, Maine.]

My first year of preparatory school work in writing English was largely devoted to practice on Rhetorical rules. Frequently, however, selections were read which were to be produced in the language of the author. The fourth class spent much time on the history of the English Language and studied works and short biographies of several American writers. These topics furnished material for occasional brief compositions.

The next year was given entirely to the study of literature. We read one author after another, and were reminded to keep a note book of their lives and works. Every two weeks, I think, we wrote in the class a theme of two pages on some subject assigned on the basis of a certain amount of prescribed reading. These themes were corrected and almost invariably rewritten.

After the second year we did no writing in the class but every three or four weeks passed in compositions at least three pages long, prepared outside. We generally wrote on subjects assigned from our reading but were occasionally given outside subjects and sometimes chose them ourselves. I have at hand an affecting essay on Poverty, a subject which I suppose must have been original. During the first three years we underwent two written examinations yearly, in which every pupil was supposed to be able to quote accurately something from every author he had read, and might be expected to write a composition.

The last year compositions came every month, and were the usual size. We were studying Shakespeare and were asked to select our subjects from the text. I believe that on several occasions I made use of the characters themselves with tolerable success. The compositions were returned to us corrected and were to be rewritten if containing more than three mistakes.

This then, strictly speaking, was my prescribed training in writing English before entering College, but outside of it comes the almost equally important practice I received from other sources. We were constantly writing two page exercises in History, and were required to put our translations into good English or have them rejected.

We certainly covered as much ground in the study of Literature, as could reasonably be expected, and on my first two years work I have no comment to make. We were constantly criticized in our themes. But I do not think we wrote often enough under criticism. A composition of three or four pages once a month does not give a student as much practice as he needs. I should suggest the four page theme every six weeks and a writing half that length every two weeks with three half hours a week devoted to class themes. Under an arrangement of this kind I am sure that shortly a course like English A would be superfluous in any College.

[A public Latin School in a Massachusetts city.]

I have briefly described the work demanded outside of recitation hours. I shall now explain the writing that we did in class room. It consisted of short, fifteen or twenty minute papers on subjects previously looked up, with an occasional hour composition. During the last two years we were required to write criticisms, in the last half hour of a period, on whatever we had read in the first half. From time to time we were obliged to write translations of Latin and Greek as exercises in English. These translations were marked solely from the English point of view, and not as to the correctness of the rendering.

I shall next treat of the advantages or disadvantages of such a course of training. I consider that work, done in a set time in class is of greatest importance for the cultivation of quickness of thought and expression. We, however, did most of our writing outside of school hours, which were taken up with reading. I should reverse this system; write in class, and read outside.

[A public Latin School in a Massachusetts city.]

A word upon the effect of Classics and French on my English will not be amiss, since the Classics at the Latin School are not the major part of its curriculum.

Our study of the ancient models of style was a distinct aid to our English. We always were expected to translate into idiomatic English, foreign idioms were often wholly refused. Under Dr. —, the value of Latin to English was clearly brought out. We sought to put the spirit rather than the letter of our authors into English which thus, unconsciously became clear, concise, and strong.

First, practice in original compositions; in this, before I came to college, I had almost no practice. I began [at a private school in New York city] to write weekly subjects chiefly chosen by myself. From these compositions I had some benefit in grammar, but little, if any, in the choice of words, or in the arrangement of the sentence.

Secondly, from almost the beginning, I was obliged to write translations from Latin and Greek. Here I gained a certain faculty of expressing my thoughts, but, at least at first, more attention was given to the meaning of the text, than to the expression of that meaning. The sentences were nearly always loose and of the same general model. I think this neglect of form was due, not to ignorance of the importance of English, but to a desire to cover as much ground as possible in the translation.

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In translations, I believe the main fault lies in that reading of Latin and Greek is begun too early, even before the student can write his own language. If, say one or even two years were given to the study of English before the classics were begun, then the student would naturally and involuntarily write good translations. Besides, this same writing would improve, instead of harm, his already acquired knowledge of English.

No. 102.

[Public Schools in Massachusetts cities.]

In the last year's study all our energies were devoted towards the English required for Admission to College. It was about this time that the great stirring up in English occurred at Harvard; and then, and then only, was the necessity of the command of good English impressed upon us.

In Greek and Latin we translated without any regard for English, the whole aim was a liberal translation of the original. In Greek especially was this the case.

On the whole, to sum up I think that the English in the school did not amount to a row of pins in the first three years of my training in the school. But the fourth year a strong effort was made by Mr. ——— to make English a prominent part of the instruction obtained in the school which before was almost wholly given up to classics and classical history.

In the ——— Latin school [Mass.], English was treated in a very different manner. The first year's work consisted of the study of Chittendon's Rhetoric and reading of Shakespeare. As the ground had so often been covered before it could not be anything but tedious, and I think it was without any good results. In the second year the work varied quite a little.

In the last year a thorough review of all the books read in lower classes and a few new ones, together with discussions in the class on any weak points, brought the class up immensely. Our written work on these books, were severely criticised and rewritten. But perhaps the best and most practical part of all the work in the Latin school was accomplished in the Latin and Greek classes of the two upper grades. Terrible examples of wretched English were held up before our eyes, and we were thus guarded against the use of that text-book dialect so disastrous to good English. This last work carried on conscientiously by the teachers had greater results than all the other courses in English.

No. 103.

[A public Latin School in a Massachusetts city.]

If four or five hours a week are allotted to English, spend at least two of them in writing in the class-room. Give to the class some subject about which they have some knowledge and have them write in a half hour or so, in as good English as possible, what they know about the subject. This will teach them how to write quickly and,

at the same time, coherently. Then the teacher can explain the faults in their work and how they should be improved.

This system of class-room exercises will aid the students in writing their compositions for they will be better instructed in style and will be able to write preparatory school English. For the compositions, as I remember them, were too laborious, they "smelt too much of the lamp." Each sentence read as if it had worked over many times and the whole effect of the composition was not one of unity. Make the English in schools to resemble, as nearly as possible, a course like English 22 or 12, only have the "dailies" written in the class-room. The manner of teaching English, while I was at school, does not seem to me to fit a man for his entrance examination in English at Harvard, for then the student must be able to write, in an hour and a half, a composition on some subject, which he is expected to know something about, but which he has not planned beforehand. Remedy this by having more daily work at the schools.

No. 104.

[A Philadelphia Academy.]

To my mind the greater part of my training in the use and appreciation of good English was derived from the practice of having written examinations once a month in all subjects. And in these tests accuracy of expression of thought and attention to a detailed, uniform arrangement of expression was insisted on. At all times was I studying and translating from two languages Latin and French, or Latin and Greek and for one year from all three. To this continued practice in translating I attribute the greater part of whatever benefit I may have received.

No. 105.

I received my training in English before entering college at [a private school in a city near Boston]. On some points of my instruction I have but an indistinct recollection, but I shall try to explain my training as clearly and correctly as I can.

In the preparatory department we studied the elementary rules of grammar. We had also to write weekly compositions, usually on subjects of our own choosing. These compositions we had to read to the class, and then we handed them in. They were criticised mainly for grammatical correctness, and were rewritten.

The next year I was in the regular school, and there, it may be said, my regular training in writing English began. We read Tom Brown at Rugby and every week we had to write a composition on something connected with the reading. Once in a while we had to write a composition on a subject of our own choosing, a description of a walk or something similar. I remember that in these compositions Mr. — laid great stress on our keeping ourselves out of the theme, simply telling in a clear, brief and interesting way our observations. These compositions were minutely criticised and rewritten.

The next year similar work was kept up, we read the Sir Roger de Coverly papers and wrote weekly themes on them. We had selections of good writing read to us, and studied the means by which themes could be made correct, forcible and easy.

The next year there was the same kind of work, reading and weekly themes. In our preliminary year we read the prescribed books, and wrote themes on every good subject in them. These themes were most critically read, and we had to rewrite them, once if not twice.

During our last year at school we had our greatest practice in writing. While in the other years English occupied three hours a week, this year we had English every day. We had a most careful training in Rhetoric and in writing. We had at least two themes a week, generally on prescribed topics. Often we wrote them without warning, in the hour set apart for English, to train us to think quickly, and to write correctly under press of time. We also wrote longer themes, that were prepared out of school. These themes were criticised and rewritten.

This is, so far as I can remember it, the way in which I got my experience in writing. I am afraid that I may not have made it clear, how much time was devoted to the study of English and of how much importance it was considered by Mr. —. It was not policy of the school to shirk English, to cram up on those subjects that counted for more hours in the Harvard examinations. Not in English alone as a study were we required to write good, idiomatic English, but in all subjects. If, for instance, our translation of Latin was good, but our English rendering of it was bad, our mark was pitifully low. Even in Mathematics, where English plays so small a part, that part had to be good. At [this school], in all subjects the English at any rate must be good. Throughout our course stress was laid on originality, brevity—Mere “padding” was not countenanced, clearness and so far as we were able, force and ease.

In my college work I have found my school training helpful to me. My constant practice in writing made English 22 easy for me, that is, I found that I could write readily, and pretty correctly, if nothing else. I believe that the general criticism I got in the course was, that my English was good, but my style had nothing characteristic about it. In my other courses, too, when any writing is needed, I find that if I know the subject that I am to write on, I can write it readily. In conclusion, I cannot praise too highly the English training that I received at [this] school; there, English was not slighted, it was considered of the greatest importance. If in this exercise I have written incorrectly lay that fault not to my school training but to me.

No. 106.

I was prepared for college at [a private school in a city near Boston]. Here, under Mr. — who taught the English, I received all my preparatory training. Before describing the work I had to do in English composition let me say that throughout the school good English was required by the teachers. The translations had to sound like English and even the mathematical work had to be clearly

expressed. The year before I graduated the school even went so far as to mark all written work on its form.

Beyond this general oversight over the literary form of all the work a great deal of time was devoted to English itself. On grammar and later on Rhetoric we spent about a third of this time. The rest of the time we spent in reading and in composition. The reading was sometimes done in class and served as a basis for our compositions. These were almost always in the form of summaries.

Mr. — usually went over the ground which the composition was to cover with us in class, mapping it out and planning it, with suggestions from us, often very minutely. Though we were of course not bound to follow this plan we were supposed to have some plan drawn up before we undertook to write out our compositions. The actual writing out was done in class with no reference to any written plan, and was supposed to take not more than forty minutes. Why Mr. — made these two rules I never understood. The only reason that I can assign for them now was an idea that having forced us to get our subject matter by heart and to know what we wanted to say, he could force us by limiting our time to say it spontaneously and forcibly. If this was his object he never made it very clear to us and in my case at least never attained it.

These compositions were read in class and as the class was small there was usually time to discuss almost all of them. They usually had to be rewritten or more properly speaking done over again. For if they had to be more than corrected Mr. — usually made us write entirely new ones without any reference to the first ones except in making use of what we had learned from them. We also had at various times other written exercises, such as for practice in paragraph structure a fifteen minutes composition after the style of an editorial paragraph.

The results of Mr. — teaching having been in the end most excellent I feel a certain hesitation in criticising the means by which these results were obtained. And yet, making due allowance for a tendency to all sorts of uncontrollable irregularities on the part of a boy's mind when allowed to act at its leisure I think that Mr. — would have taught the boys more had he allowed them as much time as they wanted to elaborate and express their ideas. No one but a genius can put a couple of pages of subject matter, no matter how well acquainted with it he may be, in good literary form spontaneously and with a rush. Even a genius will not be able to do it so well that he will not on revision find some corrections to make. For us school boys to be able to write out this composition spontaneously with anything like the best results was only possible in case we had worked them out and learned them word for word by heart. And in this case the forty minutes spent in writing them out would have been but forty minutes wasted. As it was our compositions were usually hurreyed and often unfinished.

Though he may have made one mistake in his methods I think that on the whole Mr. — obtained remarkably good results. I used, while at school, to think that the stress he laid on the necessity of method and planning in literary work as well as all other work was pedantic and unnecessary. Since, however, I have seen the time

wasted in and the results obtained from the bewildered flounderings in the tangled meshes of their subject matter of those who had never had a training like that which the men [from this school] had had I have changed my mind. As to the effect of his teaching in the more detailed field of Grammar and Rhetoric I may safely say that it was to root out of us "bad English" to what my acquaintance with men from other schools has taught me to consider an extraordinary amount; and to impress us not only with a clear conception of what clearness, force, and coherence are, but to teach us a few simple ways in which to obtain to a certain extent these qualities for our writings.

This last was due more to the man's literary good judgment and common sense than to anything in the way he taught.

No. 107.

I received my preparation in English at [a private school in Boston]. Mr —— taught English himself and I believe that his way of teaching it is the best.

I was given a chapter to read in some one of the classics, such as Julius Caesar, The Abbot etc. After I had read it I was requested to write a composition on it. When I had written this composition, Mr —— went over it *with* me and corrected my mistakes and showed me where in it might be improved.

Not only was I taught English in this way, but in all my daily work, whether in Latin or in Geometry I was always required to write good English, and many times when my proof of a geometry problem was all right, I was made to write it over again on account of poor English.

And I candidly believe this method to be far above any which I have seen or heard of. It not only teaches the pupil a thing so that he knows it for the time being, but after he has once worked the thing out for himself, he will find it a rather hard task to easily forget it.

No. 108.

Another practice in writing English, that [the instructor in this private school in Cincinnati] attached importance to was the writing out of Greek and Latin passages with special regard to English form. This work, if I remember rightly, we did once or twice every week.

No. 109.

I prepared for college at [a private school, in Boston]. While at his school I read the books required for the examinations. I did a great deal of work in correcting specimens of bad English, in fact, I did much more of that style of work than any other. I also wrote themes on the various books or characters in the books which I had read for the examination. We were required to be very particular about our English in conversation during school hours, and Mr ——

was very anxious that our translations should always be made in a smooth, easy style of English; many times I have been obliged to rewrite my geometry propositions on account of bad English. This kind of constant preparation in all our studies for the English examinations was much more practice than the mere mechanical task of writing themes.

No. 110.

The faults of my preparation [in a Massachusetts city High School] were two: (1) too much attention to substance and not enough to form. (2) the lack of any bit of original work. I should not, however, neglect to speak of the training in writing English that I received from my translations of the classics. The instructor, insisted upon careful, idiomatic translations.

No. 111.

[A public Latin School in a Massachusetts city.]

We always had impressed upon us the importance of writing our translations from other languages in the best English.

Occasionally our rank in English was determined by the language we used in our translations in written examinations. The greatest objection to this practice was that the translations were liable to be sacrificed to style.

No. 112.

Having had so little to do with composition, I am hardly in a position to criticise. The way to learn to write English is to write English and it is this very thing that I have missed. On the other hand, I may have been helped by debating and much historical reading; this last being possibly the reason for which my English is criticized as stiff and bookish, even when grammatically correct. Such work cannot take the place of real practice in writing.

I have little fault to find with my instructors [in the High School of a city in the State of Washington, where I was prepared for Harvard]; as far as the English itself is concerned they could do no more than they did. But if they had insisted on better English translations in the classics, I should have been the gainer. I think they were too often satisfied with stiff, ponderous and, at times, even with incorrect English. If more attention were paid to this, Latin or Greek would mean work in a living, as well as in a dead tongue.

No. 113.

My serious training in writing English began in the winter of '94 at [a private school in a city near Boston]. The greater part of the exercises in English composition were written in the class. During half the winter and the spring of '94, I wrote a weekly theme, which was corrected and rewritten. The next school year, much time was devoted to the study of paragraph structure: one paragraph not

exceeding in length one page of theme paper was written nearly every week; these paragraphs were usually expressions of opinions, not narrations or descriptions. When, during the year and a half before last June, the books required for admission to Harvard were studied, I wrote reproductions of scenes from "The Merchant of Venice" and "Silas Marner"; short themes, for four or five of which one hour was allowed, on subjects chosen from the required books; and a few longer themes on the stories or parts of them. Of work outside the class-room there was little,—an occasional theme needing careful reference to the text of one of the required books, a few translations, and one thesis, of a more ambitious character. Great pains were taken that all translations should be in good English, and all the written English handed in to every teacher, was counted in the English Composition mark: thus opportunity was given for the constant practice of what I was learning.

I consider my preparatory training in writing English excellent: it was systematic yet varied, and gave the chance for the imagination and ingenuity to grow along with the power of expression; and above all it was interesting, which is the surest incentive to work. I look back upon my hours spent in writing English as some of the most profitable of my school course.

No. 114.

I received my training in English at [a private classical] School, New York City.

In looking back upon the eleven years of my school life, I notice that the work in English was carefully mapped out, and from the Primary to the Senior Department, presented one natural, steady progression. With the exception of the two years in the Primary Department, during the nine years of school work, one composition a week was written. It was then discussed either in class or in private with the instructor, and then rewritten.

The compositions were sometimes on imaginary subjects, especially in the lower classes, but more frequently on topics of the day and on the reading that was done in the other periods devoted to English. In the very first composition hours, charts were placed in front of us, representing either some scene or some animal, and then we were expected to write on anything that the picture suggested or on the picture itself. This served the double purpose of object lesson and composition work. The books we read were chosen with great care, read in class, explained and every effort made to interest us in good literature. I was guided in my outside reading by suggestions from the instructor, as well as by those of my parents. In the last few years a certain number of good, interesting books were assigned for summer reading, which we were expected to read. These were chosen frequently from works of contemporaneous literature, for during the school year little time, of course, could be devoted to these. This outside summer reading was assigned chiefly to stimulate an interest among us for good literature. I know that it had that effect upon me.

The corrections of compositions by the instructor were good, and care was taken to point out not only the unmistakable errors, but effort was also made to bring out the finer points of rhetoric. This was the case especially in the Senior Class. Opportunity for expressing thoughts in writing, was not limited to these composition hours alone, for besides the oral translation from German, French, Latin and Greek, there were written translations in these same subjects. The instructor always tried to impress upon our minds the importance of good, idiomatic English. In the study of a foreign language, like German or French, the first object of the teacher always was to try and make us learn to speak the language, and as we had a born German and a born Frenchman as instructors in these languages, they naturally did not always correct the mistakes that were made in translating into English. To counteract any bad influence this might have exercised on our English, we had an instructor one year, who was master of both English and German, and who insisted upon good, idiomatic translations into English.

No. 115.

I prepared for College at [a classical School in Philadelphia]. From this school most of the students go to the University of Pennsylvania or to Princeton, so that of a graduating class of thirty about four come to Harvard.

All the students of the same class are at first given identical preliminary training in English but as they approach their entrance examinations they are divided into sections according to Colleges. Thus there are often gathered in the same class room at the same time fellows going to all these colleges, and each set doing different work under the same instructor. In this way, the Harvard division gets only a small share of the instruction as the teacher is apt to pay more attention to the larger divisions.

We did most of our work at home. We read the books required, wrote our compositions on them, and then had our mistakes corrected in class. Under this system the Harvard division received very poor instruction. This happened last year. The year before we had an abler teacher, who with the same time, class, and method gave us better instruction. Besides our outside compositions, on Mondays and Fridays, we would read passages from the books required by Harvard and then write a few paragraphs on what we had read. On Wednesdays we corrected specimens of bad English and discussed general faults, likely to be made.

After a rule had been made that English and neatness would count twenty percent of our examinations there was an appreciable improvement in our work. Although this rule was not strictly enforced by all teachers, our Greek and Latin instructor, a Harvard graduate, paid special attention to it and would not, in fact, accept any translation that was not good English. Although he did not directly teach English, he exerted an influence in that subject over me that I cannot overestimate.

No. 116.

[At the Academy, in a town near Boston where I prepared for college], I also studied English in connection with my course in History. There, for the first time, was the importance of unity, and the need of an outline or digest in writing every theme, impressed upon my mind. Each week all the important news of the great nations of the world was cut from the newspapers, and at the end of the week a theme was written, great care being taken to make this exercise, not a mere chain of facts, but a connected history written in good, idiomatic English, and in as interesting a style as possible. Each week we also handed in translations of passages from the Greek. This was made wholly an exercise in English, as the main object was, not merely to render a translation, but to present the Greek ideas before the reader's mind in the best English possible. We were also taught that, in the study of foreign languages, we were also mastering our own, since all translations should consist of the original thoughts expressed according to the English idioms. So far I have found no new methods in college in studying English.

No. 117.

[An Academy near Boston.]

The next year I had no English recitations, but my practice in writing English was kept up by written translations of French, Latin or Greek. These translations were corrected with strict attention to the English, and no-one could get a good mark in it unless the English was good.

During my last year at school there were three recitations in English a week; two of these were devoted to criticizing already written themes, and to writing new ones. Besides these themes, written translations of French, Latin and Greek were still kept up. In fact that year's work was principally devoted to the study of the English language in all its branches.

No. 118.

I received my training in writing English during my four years at [an Academy in a town near Boston] before entering college.

My instruction in English during my first year consisted of three hours a week; one devoted to spelling, and two to reading. Besides this I had to write compositions of three or four pages every month, the subject of which I could choose for myself, although it was usually specified, narration, description or exposition.

The next year I had only two hours a week; the first was taken up in reading books; and the second in writing a short half hour theme, sometimes choosing a subject myself, but often writing on a book read in class.

During my third year, although I had no English recitations my training in writing English still progressed owing to the special care

taken in the departments of Latin, Greek, and French that all translations made should be good English. And I think this is as good training for expressing oneself in good English as the study of the rhetoric or the writing of themes.

In my last year I had three recitations, two of which were devoted to writing themes and having old themes criticized by our instructor. Long compositions were also written about once a month, sometimes a summary on a book to be read for entering college, or often a criticism of a book.

The writing of short themes, the subject being left to my choice helped me a great deal in the short themes I had to write last year in English *A*. It gave me a great experience in deciding upon a subject quickly, and in writing clearly what I wanted to say, without wasting time thinking how to express this and how to say that. The long compositions I wrote once a month, my first and last years at school, correspond with the fortnightlys I have to write this year for English *B*.

On the whole this preparation I received in writing English has been very satisfactory. Of the writing of short themes all I can say is, the more the better. They are certainly a great aid in teaching anyone to express his thoughts clearly and forcibly.

No. 119.

[A public Latin School in a Massachusetts city.]

In the third class I began to study with an aim towards College English. I read aloud from Addison's papers in the *Spectator*, I read aloud and recited Macaulay's *Lays of Ancient Rome* and a few other poems of standard authors. Our compositions during this year were from subjects of our own choosing, and once in a while from subjects given out by the instructor. I also had exercises in translating from Greek and Latin. These translations were criticised as much from the English standpoint as from that of a translation.

In the second class my study took a jump (as it were). I now began to study plays of Shakespere and one or two other English classics. I also began to study part of the English required for admission to college. This was the study of the principles of rhetoric such as are taught during the first half of English *A* in College. I translated as in the lower class passages from the Greek and Latin languages. These passages were longer and much harder than before and more sharply criticized. Besides these translations I also wrote compositions from subjects of our own choice. These were expositions and narrations.

In the first class I studied altogether the English requirements for college. I read outside of school hours a number of books, from those given out by the Harvard Authorities. When the time given for reading these books had expired, I had to write on either some character or characters, or some topic taken from the book. Three times a week I had to write ten minute themes on any subject we chose. These were handed back to us and we were supposed to correct all errors. I recited some poetry and wrote many long sight

translations from the Latin and Greek. These translations were taken from Virgil, in Latin, and Homers Iliad and Odyssey in Greek.

These translations from foreign languages did me the most good of anything. It taught me to have a fairly large vocabulary and to think quickly. Those ten minute exercises were a sort of introduction to English 22. These also taught me to think quickly. I do not think enough was taught me about expositions and narrations and the difference between them.

EDUCATIONAL ANOMALIES.

Pages 419-421.

No. 120.

Of the four year's instruction in English Composition at a High School [in a city near Boston], the first amounted to practically nothing. We could not have written more than five or six exercises, and these were never returned corrected so that we could see where our faults lay. I remember reading some of Irving and of the "Spectator" and drawing up tables showing the treatment of the subject by Introduction, Development, and Conclusion with their various sub-topics. All our work in the three years following was carefully planned on these lines—a careful introduction and moral or summary at the end. Our teacher was an admirer and student of English writers of this century and based the work mostly on that. Every one had a list of standard authors—a little beyond him, I think—such as Walter Pater, Symonds, Matthew Arnold, Ruskin and Harrison and from a selection of one, weekly drew up a sort of summary—half criticism and half copy. These were read in class and criticised more for what they contained than for the way it was put. Then a sort of discussion would begin about art and originality which was rather interesting and which gave us a lot of rough ideas on those subjects. A review, as it was called, was expected to be written on these recitations or discussions and be ready for reading at the beginning of the hour. This as a matter of fact was seldom done and then only in an off-hand way. Toward the end of the third year we were asked to write verses—simple ones of four lines—and showed a little about the technicalities of English verse.

This was all the English training we had, aside from history and reading Latin and Greek. We got a sort of general idea about the English writers of the century, what were their peculiarities and what they stood for. The result was that the themes contained big words got from Matthew Arnold and placed so as to mean nothing. Moreover these themes were apparently never corrected. I remember one fellow handed in three blank sheets of paper inside the conventional cover; the theme was returned approved.

Of course some of these mistakes and omissions were due to the largeness of the class. However, it seems to me that the whole

work was based on too high an ideal. We were making poor copies of great authors instead of going through the drudgery of minute, careful preparation.

No. 121.

My second year training consisted in reading Irving's Sketch Book, the monotony of which was broken by weekly exercises in figures of speech, short compositions on the various Sketches, synonyms and antitheses.

Let me protest right here, against having to read the same works again and again. I have had the "Sketch Book" and "Evangeline" rubbed into me so thoroughly that I never want to see the former again; the latter is redeemed by its beautiful sentiment. No less than four times in six years did I read those "Sketches," with a growing dislike, not for the sentiment or for the style, but for the dull disinterest which such a book must necessarily have for one between thirteen and seventeen. Of course, I except "Sleepy Hollow" and "Rip Van Winkle."

In the next year, I began my study of Shakespeare with "Merchant of Venice," all of which I failed to appreciate, except the speeches of Launcelot Gobbo. This was followed by "Twelfth Night," which made a much stronger impression on my youthful mind, from "the very nature of the beast."

As to "translation" English, I have only the highest praise for the care that was taken in Greek, and in Latin. Good English was always insisted on by all the teachers whom I have had. On this point, therefore, I have no suggestion to offer.

On entering the High School, there should be at least three hours of the average fifteen of recitation, devoted to short theme work, and analyses of simple books and the characters therein. More of the modern writers should be read, as well as more of the ancient. Enough ground is not covered in outside reading. Milton, whom I failed to mention in the statement of my reading of my two last years in school, should be wholly laid aside. The undoubted beauty of his poetry is hidden too deep for the ordinary school-boy and girl to appreciate. In his place more Shakespeare should be read, but at a later date than it is now taken up. The time devoted to theme work should be increased as every year goes by and more themes should be written outside school-hours. In this way, English *A* would be made unnecessary, and would cease to waste time when it is far more valuable than it is in school-life.

No. 123.

Long monthly themes were required of us, which were severely criticised, and had often to be rewritten. We also wrote comments on books connected with our study of English literature, from Beowulf down to the works of Hawthorne. . . . During my second year at

[this Academy in Eastern Massachusetts, the instructor] had us spend much of our time studying figures of speech. We wrote original metaphors, similes, and especially, the more elaborate fables and allegories. We also learned the different kinds of metre, and verse, and did a great deal of paraphrasing, mostly from poetry to prose. I remember paraphrasing, among other poems, Browning's *Caliban on Setebos*.

No. 124.

Practically little or no practice in writing English was given me before entering Harvard, which had any tendency towards assisting my work in any of the prescribed English courses at College. We had little or no rhetoric or grammar or in fact anything which would tend to give us a foundation for correct writing of any sort. Our instructor, considered that we should be doing other work; he therefore kept us busy reading Tennyson, Browning and Wordsworth, a work in which, at that age, many of us naturally lost interest on account of the depth to which we were driven. We were obliged, in our written work, to "criticise" the authors, we, who could not pretend to write correct English; we then were compelled to deduce from these works the state of mind in which the authors were when they wrote the books, and to judge for what cause and with what end in view they did so.

As a result, those of us who were not naturally "good spellers," and not apt at literary composition are at a very serious disadvantage in the more elementary work to which we have "risen" at college.

No. 125.

It is with pleasure that I look back upon my career and meditate upon the course of English as prescribed for me in the the preparatory school, from which I came, for, as an undergraduate, I thought that the system was perfect, now I can see its defects.

I was in the class of Ninety-five in a High School [in a city near Boston], and for my education in the English language, I was placed under the care of a very able man. I spent my first year in the study of Washington Irving's Sketch Book and Webster's Bunker Hill Oration. I was expected to read these books, get what I could out of them and come into the class room and tell what I had read. I was also expected to give my opinion on the writer's style.

The third year of my work in English was spent in writing book reviews. I was obliged to read books and essays by Emerson, Matthew Arnold, Dr. Johnson, De Quincy, Winter, George Eliot and a host of others. Once a week, I had to read one of these books and then reproduce its contents. There was little chance for originality and this is one of the chief flaws in the course. In my senior year, I studied Milton's works and wrote essays on them. Twice a week I did this. Besides that work, a sketch of the English language was given me, which I was expected to learn. It described the different periods of the language, giving the names of the greatest writers of each period.

Then I thought that I was thoroughly prepared to take the Harvard examinations. I was told to "cram" on Milton's works as there would certainly be questions on the paper based upon them. I obeyed orders. The last of June found me taking the examination. I was greatly surprised when I read the paper to find that it was based upon Longfellow's *Evangeline* and other books which I had studied in the grammar school and which I had not read for four years.

No. 125.

I think that part of the system which provided for our writing upon what we had read did us the most good. We learned to imbibe the style and elegance of the author better and it was much easier to conform our language to his than if we had been obliged to follow rules. We also, by reading different works got acquainted with different styles. We learned to compare and distinguish.

If we were summarizing a portion of Macaulay, it seemed to be more natural to write short crisp sentences, each laconic and periodic than to write the flowing style of Matthew Arnold. Thus each student had the opportunity of creating his own style of writing, and I think a person's own natural style, whatever it be is the one for him to use and endeavoring to change this to conform to others makes his writing mechanical and not pleasant.

No. 126.

In my Junior year I had but one lesson a week. In the first part of the year we read certain books and then we wrote reviews on them telling the plot of the story and discussing the words, sentences, and paragraphs. We wrote these once a week and talked about them in class. In the latter part of the year we read Webster's Bunker Hill Oration. We studied the periods of American literature and Webster's place in them besides his life and the periods into which it was divided. We separated the Oration into its several divisions and made a paragraph analysis and later we compared it with Webster's three other great orations.

I again had English twice a week in my last year. The first book we studied was Macaulay's *Essay on Milton* and of this we made a paragraph analysis. Besides studying the periods in Milton's life we read his early writings and later *L'Allegro*, *Il Penseroso*, *Comus*, and *Lycidas* and then we divided his literary work into periods. We went over the prescribed reading carefully, looking up the classical allusions, examining the metre, and reading up the cause and history of the works. After we had finished Milton we took up the Drama in ancient countries and then that of England especially. Next we studied Shakespeare's life and three plays, *The Merchant of Venice*, *Midsummer Night's Dream*, and *The Tempest*. From an examination of these plays we found out the order in which they were written and the periods of Shakespeare's writings. We studied the history of the plays; when they were written, the date of the editions and the sources of the stories.

My next experience was at — University. In the fall we read Macaulay's essay on Johnson. A few pages were assigned for a lesson but these were carefully reviewed as to meaning, paragraph and sentence structure, correct use of words, historical and other references. Our teacher was a young — graduate. He seemed more particular about topic-sentences and meaning of words than about literary style. I think I learned or at least tried to learn from Macaulay's style one thing, and that was sticking to the subject under consideration. In the winter and spring terms we read Carlyle's essay on Johnson and Johnson's *Rasselas*. In these we found more literary qualities and less topic sentences etc. The meeting for reading these essays took place twice a week throughout the year. Once a week all the freshman class met for a lecture by the head of the course. This gentleman, I understand, is a good philologist, but as a lecturer in English he was a sorry failure. The first half of the hour was spent in this lecture and the last half in writing a short theme on some subject taken from the essays. These were corrected more or less carefully by the instructor and handed back. I think these weekly papers did me as much good as all the rest of the course. Two or three long themes were written during the year, which were corrected upon the principle of "whatever is, is wrong." Statements that the most ignorant person would understand were rejected and if there were enough blue marks on the paper it was rewritten. The term examination were based upon rhetoric, words, and a short essay.

The work of the third year bore directly upon the preparation for the Harvard requirements in English. Instead of confining our Shakespearean study to the required work, we took up other plays as well as those assigned, and much written work was based upon the reading. In the play "Julius Caesar" particular attention was paid to character sketching, and in "Midsummer Night's Dream" we were asked to write an essay on "Shakespeare's Use of the Fairy Elements." In the study of "The Merchant of Venice" we wrote an account of the famous "Court Scene," bringing out the characters and motives of the individual personages. In the study of Shakespeare we also wrote an essay on "The Elizabethan Stage." The work on Shakespeare was divided among different parts of the year, and, to produce a pleasant variety, we read from the works of other writers in the time intervening. Among the poems read were "Evangeline," and Tennyson's "The Princess," also "The Lady of the Lake" by Scott. I wrote an essay on "The Burning of Grand Pré" in connection with the reading of *Evangeline*. The fourth year, English was simply a continuation of work in preparation for Harvard. In the study of Washington Irving, as of all the other writers, I wrote an essay on the author's life. We were asked to write a character sketch, trying to imitate Irving's style, and also to write a bandit story similar in character to those of Irving. When we read Defoe's "History of the Plague," we wrote upon "The Method of

Burial." In speaking of the rest of the work, I will simply name the essays written: "The Time of Cromwell," "The Scene in the Church" (from "Woodstock"), "Scott's Estimate of Cromwell," "Charles II as portrayed in 'Woodstock,'" "The Character of Sir Roger de Coverly," "The Time of Addison," "How Silas Marner became a Miser," and "Leaves from the Journal of Silas Marner."

The main object in the advanced work was to write an original essay in the style of the author, from whose work the suggestion as to a topic was gained. In carrying out this idea I think the best results are to be obtained.

On the whole, I consider that the training I received in preparatory schools was most efficient. It started with the method of reproducing the words dictated by another, and later developed into the original writing of the scholar, upon a subject either original or else suggested by the work read, and with an effort to imitate the style of the author. These two methods are being used in the work in English at college. As an illustration of this, we were asked to write the substance of Cardinal Manning's essay on "Intellectual Training," after this essay had been read by the instructor. Again, we have listened to selections from some modern author's works, and have been called upon to write an original theme upon something suggested by the reading. This has given an opportunity to imitate style and develop originality. In my High School study I was fortunate to have as instructors two ladies who had recently graduated from college. The instructor whom I had for the greater part of the time, is a graduate of Radcliffe College, and she is for this reason in close touch with the methods of this University. The only thing I wish to criticize about the methods used in the High School [of the town near Boston where I was prepared] is that originality is not sufficiently encouraged. I remember at no time in my High School course of being called upon to write an essay, or rather, a theme, upon a topic of my own choosing, having no reference to a particular matter. Because of this deficiency, I find it difficult to write successfully according to this method, which is used most frequently in theme-writing in our English course at college. I think less time should be spent on the study of grammatical peculiarities in the authors read, and more time on originality in writing.

No. 129.

Looking backwards over my preparatory course there is much that I find which would have admitted of improvement. The Grammar School might well have gone into Rhetoric a little deeper. In the [school in Boston where the writer was prepared], English on no account should have been so neglected for other studies; particularly Latin and Greek translation, tend to cramp and freeze one's English style. From my preparatory course I should have had help in my College English; but I got a load instead, which bore me down.

After this struggle with the dry bones of Caesar, I find myself now able to write in a lively, interesting style. In this I have con-

quered; but there is another load, the off-spring of my preparation, which I have still to lift. This is my failure to attain an *easy* style. However, with this as with the other relics of my preparation, I shall conquer in the end.

No. 130.

The next year . . . we wrote compositions and read the *Deserted Village* by Goldsmith and Gray's *Eulogy*. [Our instructor] made the course very interesting; but I think the class was too young to appreciate such works.

During my [next] year we wrote compositions once a week, and studied Milton's poems and read *Paradise Lost*. I never understood *Paradise Lost*, and so was not interested in the course. We also had to memorize different parts of *Paradise Lost*; I never saw the good in this, and I am sure I never got any good out of it.

[The next year we had a new English master] and therefore my fifth year in English was very dry and stupid. We wrote *Discussions* and *Expositions*, and read some English authors, such as Keats and Byron. During this year I learned nothing whatsoever.

My training in English while at the Academy [in north eastern Massachusetts] seems to me defective in that it spent too much time in reading poetry that we were too young to understand, and did not give time enough to the teaching of English Composition.

No. 131.

Short themes* once a week on the plays of Shakespere were followed by the reading and writing of themes on Webster's *Oration on "Bunker Hill."* Sir Roger de Coverley came after Webster's *Speech*. At the time of reading "*Sir Roger*," I was not old enough to appreciate Addison's style. I remember at the time I thought Sir Roger about the driest and most uninteresting book that I had ever read.

No. 132.

My work at [the Academy in Eastern Massachusetts, where I was prepared] was slightly more advanced. We were given a certain part of a book to read, and then in class we were questioned on it. Our study of the *First Bunker Hill Oration* was particularly thorough, though somewhat tiresome, as our instructor admitted. After reading the *Oration* through two or three times we studied it by sections, and then by paragraphs. After a month's study we knew how many paragraphs there were in each section and what each one was about. When we read the "*Merchant of Venice*" and "*Midsummer Night's Dream*" we used editions with notes at the end of the book, not at the bottom of the pages. For each recitation we had to read a certain number of pages and write the notes in the book. In this way, we remembered the peculiar words better.

No. 133.

"In studying Webster's "Bunker Hill Oration" we had to be able to discuss any paragraph in the following manner:— First, give the substance of it in one sentence; secondly, taking each sentence in turn, tell how it explains the general thought of the paragraph, and why it could not be left out; and, lastly, give reasons to show whether the paragraph as a whole is a good one or not.

No. 134.

The third years work was exactly the same as that of the second, except that we had a different set of books to read. It was counted in the same way, and I did just as much work upon it. The books we had to read were Addison's "Sir Roger de Coverley" and Webster's "Oration at the Laying of the Corner-Stone of the Bunker Hill Monument." How much I enjoyed these books may be understood when I say that I can recommend either or both of them as soporifics, positively not followed by any evil effects.

No. 135.

I attended a High School [in a town near Boston] and took the regular English of the College Preparatory Course.

The third year was taken up with a history of English literature. The most important of the authors from Chaucer to our own time were studied and parts of their works read. We were required to write character sketches—delectable occupation!—of many of the authors, and criticisms of their works. The general faults were these. The themes were not criticised severely enough either as to form or subject matter. They were almost never rewritten, which rewriting although an unpleasant thing, is nevertheless most excellent practice. The amount of work done in class in a limited amount of time bore a very small relation to the whole amount done. The productions were usually prolix or else read wonderously like the encyclopedia, although this fault was not so marked in the work of the last half year. Both of those evils could be corrected by a little fierce criticism and the revision of a few themes.

One good feature of the instruction was the reading of themes in class, for the students could get an idea of the work being done by the others. Themes so read were criticised by both teacher and students.

Against one thing would I protest. That is the writing of criticisms of the style or works of an author by students of the high school grade. The result of such attempts is either a failure or a simple transcribing of the opinions of others. Let the written work give some room for individuality, for the man to express things which he himself has observed and felt. If he really has opinions of his own on any author's style, "something that won't stay unsaid," then let him write thereon; but such will seldom be the case.

No. 136.

In my first year at [the Academy in New Hampshire]. I learnt more English than at any other time in my life. We had two recitations and wrote three themes a week besides a voluntary lecture Saturday on Shelly, Keats, Wordsworth and Fielding. These lectures were very interesting. I learnt enough that year to pass my entrance examination for Harvard.

The next year we had another master. He was a very clever, literary man, but his weak point was his fondness for Milton. I found this out and before every examination in English I used to call on him and discuss the beauties of Milton's four lesser poems. In this way I not only got good marks in my examinations but also made him think I was quite a literary person. We learnt a lot of Milton, and a little about writing compositions and that was all.

No. 137.

My early training in English was obtained at the High School [of a Massachusetts city near Boston] and was I think decidedly lacking in many of the essential points. In the first place the training in English there was largely discussing the merits of various authors with little attention given to original or critical writings. In my second year in this school we took up such things as "The Vision of Sir Launfal" and read them, but the instructor pulled the poem to pieces and discussed its philosophy with such vigor that I became disgusted. Then we were required to tell our views of the poem and talk philosophy. Imagine if you can a youth of fifteen or sixteen years doing such critical work as this. Why in some ways as much was expected of us as in such courses as English 7 and 9 in College. Whatever love I had had previous to this time for poetry immediately vanished. I remember in my last two years we took up Wordsworth, Tennyson, and Browning, and were required to write short themes showing our appreciation of the work read. We had very little if any original work.

Now I believe if a person is early taught to write on experiences and the like he will learn to be observing and will, before he gets to college know something of the value of clear expressions. It seems to me that if my time had been spent writing a few themes on topics of this nature instead of on Wordsworth, Tennyson, and Browning I should today be more able to express myself clearly which is such a necessary adjunct to college work and examinations. I think if this study of Wordsworth, Tennyson, and Browning had been left until college or after, it would have been more beneficial and I should perhaps understand better what even many much older people have difficulty in understanding.

No. 138.

The next year, we read Irvin's Sketch-book, writing short essays on a few of the stories. We also read Plutarch's Lives, and many other books. We devoted most of our time to analyzing sentences

according to a diagram afforded by the teacher. I do not see any advantage in this work, which used to occupy three hours a week. Perhaps if I tell you that some days the hour set for English was given to Latin, you may see of what great importance English was. I now had rather be able to write and speak English correctly than to know all the Latin and Greek imaginable.

No. 139.

I received my first training in English at the Latin School [of a city in Massachusetts]. At first my attention was directed almost exclusively to spelling and punctuation so that I learned to be careful and particular about my work. I thoroughly believe that the chief advantage of this was that the style and individuality of the writer was left alone. This I think is where the teachers of English of the present time seem to trip up. They try to dictate a certain style which they expect their pupils to follow. They say, "Look at the great writers of the world. In their youth they studied and copied the style of other so as to perfect their own." This seems reasonable at first but realize that all these great writers were great writers. They had strong individual genius which was bound to keep them individual. Yet we must all admit that they must have been helped by their study of other style. However everyone is not a genius and those of us that are not might become good individual writers if it were not that our entire individuality is swallowed up by the constant attempt to imitate the style of others. We have not power enough to withstand our natural instinct to copy so our individuality is lost and we become more or less successful parrots.

At the end of my first few years of training I had not lost my individuality. I had strong imagination and I could write clearly and simply, though I must admit my sentence structure was often faulty. I even won a much coveted prize for the best composition in the lower school. Where is my imagination now? Where is my simple direct style? Gone! Now I write in a forced artificial style, trying to get color and imitate the style of Stevenson. Everyone in college tries to copy the same style with more or less success. Only the other day I heard a fellow in Eng 22 say "If I could only get into the swing of these dailies, I'd get a *B* in the course easily." Get into the swing! It is only a matter of time when you will have all your wet boots "squelch," and all your trees "purple," and all the passing electric cars give a "dull monotonous rumbling."

From the time I entered the upper school of the — Latin where they began teaching "style," my work has slowly fallen off. When I came to college I found this idea of imitating styles in a much higher state of development. I had passed off English *A* and so I went directly in English 22. At first my themes were marked "not specific" and "colorless" and advice was given that I should read Stevenson's works. I read them and I imitated. My themes were praised but where was my own individuality? I am now only a fair imitator. My work is neither one thing or the other and I lay it all to teachers who taught me to imitate.

No. 140.

The study of representative works of classic authors, and the writing of compositions, either on the subject of the book in hand, or in a conscious imitation of the author's style, together with the thorough use of a text book on English Composition, made up the work in English of the class in which I was graduated in 1892 from a High School [in a city near Boston].

This study of the authors included the careful reading of the life of each author as well as his books; some memorizing, among the poets; and, as it seems to me now only a little writing. My efforts to put thoughts of my own into words in the peculiar swing of each author's style were exerted in a task at once as pleasant and as profitable as I can conceive that a teacher could set; although, of course, such attempts were always far from successful. I remember in particular how I liked to mimic Addison, whose quaint, clear, quietly humorous style made him my favorite in a group including, among others, Shakespeare, Webster, Longfellow, Macaulay, Scott and Dickens. The inimitable personal traits of each author became more evident to each of us who thus strove to copy his manner, than any mere criticism could have made it, and we were at the same time improving our individual styles.

An increase in the amount of such written work is the only change which I am able to suggest in the methods of my preparatory training.

No. 141.

In the autumn of 1895 I went to [a New York University]. At this University the English department was considered a strong one; Freshman English certainly was — I never had to work on the subject so hard in my life — too much, in my opinion, was required of us. Mondays and Wednesdays at 8 o'clock we studied Macaulay as a model of style, having to analyse all paragraphs, words, and constructions. Thursdays all sections of the department met in Library Hall to write paragraphs as similar to those of Macaulay as we were able. To the degree that they approached Macaulay's were they considered meritorious and were marked accordingly.

No. 142.

As I remember it [the reading the prescribed books and writing themes on subjects chosen from them] was turned out by the yard and was naturally of unvarying worthlessness. On looking over my themes, I find those that got the highest marks, written in a stilted high-flown imitation of Macaulay, who was revealed before our dazzled eyes as the "Apothesis of Style." Of the other themes, one especially in which I managed to get down a little nearer nature was scarlet with its shame!

WORK UNDONE, AND REDONE.

Page 421.

No. 143.

I went two years to [a Massachusetts city] High School where very few compositions were required and my practice in writing amounted to very little. Then I went three years to [a well-known private school in Boston of old standing], where much attention was paid to all branches of English, especially declamation and composition. We were required to write a great many compositions, stories, and exercises: but these commonly laborious and disagreeable tasks were made very interesting; and when I graduated, though I may not have acquired much ability in composition, perhaps, I had, at least, a strong interest and pleasure in writing.

It was their aim at [this School] to make writing a pleasure not a task, and in my case they succeeded. They realized that everybody writes in a different style, and that it kills a young student's ambition to improve his own style if he is made to write in that of another author of a different turn of mind who has spent years perfecting his. If a scholar had originality of thought, expression, and imagination, they cultivated it. Just because he did not follow Dickens, Thackeray, Irving, or Hill's Rhetoric, they did not slash through his pet ideas and phrases with bloody ink, saying that reputable authors didn't write that kind of English. They knew that young men's thoughts must necessarily be crude and awkward in expression; and that by proper direction and training, those minds which write questionable English now may create masterpieces when they reach maturity; whereas, if checked in their first original ideas, they will get into the rut of mediocrity from which they will never get out. I know my own compositions suffered all kinds of toning down and redressing, but whatever of newness, brightness, or wit there was in them was carefully left. I was always encouraged, never discouraged.

No. 144.

So far as it went the instruction in English at the High was good in every way. The teachers used excellent English in comparison with that of the Harvard instructors. They did not, as men do here, pronounce the same word at different times in different ways. However it cannot be expected that in four years we could obtain even a good knowledge of English, for as in most preparatory schools, less time was put to English, on an average, than to any other study. The principal object the teachers have in view is to enable us to "pass" the Harvard examinations, so that they give us only mediocre instructions in all subjects; and yet, the Harvard examiners, taking for granted that we know English better than anything else, because

it is our native language, mark us a great deal more severely in that than in other subjects.

Somehow or other I have not received much benefit in English at Harvard. The Wednesday work is very pleasant, I enjoy the dean's remarks, but the trouble is, we do not have enough time for our themes. The study of Mr. Hill's rhetoric would be beneficial, but our instructors do not care whether we get out lessons or not; they say it is for our own good to get the reading assigned; and that they are mere automatic marking machines. I know it is for our own good to do as they tell us, but still an instructor's indifference has no good effect on the class.

No. 145.

One other thing, which I have noticed since entering Harvard, is that "fine writing," or any attempts at that are much more harshly criticised here than in a preparatory school, or at any rate, the one which I attended.

THE ENVIRONMENT OF SCHOOLS.

Page 417.

No. 146.

The greater part of the very meagre training in English composition, which I received previous to entering Harvard College, was obtained in [a high school in Maine]. The instruction in English at this school seems to me almost astonishing in its scantiness. The school is intended for a fitting school, to the Maine Colleges, and the standard, particularly in English is, for this reason very much lower, than in the schools fitting for Harvard. But not only was the instruction itself of a comparatively low grading, but the instructors seem to me, as I look back, utterly incompetent to teach anything more than the most elementary principles of English composition, and this, probably owing to the fact that the majority of them were not even college graduates themselves, but at best had only received diplomas from the very high school in which they were now deemed fit to lay in others the foundations of, perhaps the most important branch of a good education.

Perhaps the best way for me to show how deficient this training really was, is by showing the method of work as it then was, and, for ought I know to the contrary, is to-day.

The work was without system. During the first year, of the four years course, the instruction amounted to very little. For the first two terms there was no instruction whatever in writing English other than writing (I think) two regular compositions of perhaps three pages, ordinary note paper, in length. The subject of one of these "articles," as they were called, was given out by the instructor, of the other, chosen by the pupil himself. Besides these two composi-

tions, there were several exercises in writing extemporaneous composition. All of this work was of the most cursory kind. The pupil merely handed in his work, and after a certain time received it back again, with perhaps a few grammatical corrections. No criticism whatever as to the style, and no directions as to the way it might be greatly improved. Never was the pupil required to rewrite his composition. During the last term there was a small amount of instruction given, with "Lockwood's Lessons in English," as a text book. So much for the Freshman year. In respect to the English instruction I received, I think it was the most satisfactory of my whole high-school course, because the instructor was a man who might have been valuable had he been encouraged.

The second and third years may I think, as regards English instruction, be counted as a blank. The work was practically the same, as that of the first year except, I think it was on a lower plane. One of these years the training was conducted by a female teacher, who, while I esteem her highly in other ways, knew, in my opinion, almost nothing of English composition. Why should she be highly educated, when she was but a graduate of this same school?

In my senior year, there was some improvement. For the first term the work was practically the same as in the preceding years. The occasional writing of an extemporaneous theme, with perhaps one longer composition. The last two terms however were given up to the preparation of two long compositions, one of which was the graduating essay. This work was supposed to be considerably above the standard set for ordinary work, and it would have been so in reality, had proper criticism been given it. As it was, this work was only superior to the other in its length.

I cannot say then, in looking back upon it, that my preparatory training in the high school, as regards English composition, was good and sufficient, in any respect. It was defective because it lacked a good system, because there was too little practice in writing, because there was too little criticism, and hence no chance for improvement, and most important of all, because the instructors were (it seems to me) inadequate. I do not think that Harvard expects too much of the student applying for admission, but I think the fault lies almost wholly with the preparatory schools. I consider, that I owe my good fortune in my English entrance examination, to my own outside work in preparation.

No. 147.

I was sent to an English preparatory school, when 11 years and 3 weeks old.

I was there well grounded in everything except English, there was no such thing as writing essays, or even dictation.

At 14 I was sent to [a large preparatory school, not far from London], where I remained till last summer.

I was there taught the Classics, a little Mathematics, French and $\frac{3}{4}$ of an hour history a week.

There was no attempt made to teach English, the [nearest] approach to it was a weekly paper on the history to be done out of school.

The spelling mistakes in this were generally corrected, and the papers handed back to us.

This however only existed for the lower forms. During the Christmas and Easter holidays we were obliged to read some specified book, and answer a few questions on it's plot, on our return. But this was merely a farce, little or no attention being given it. Most boys read their books in the train on the way back to school. This is a great school in many ways, but it certainly cannot pretend to teach one to write good English.

I think that if the boys should be compelled to write a weekly essay, much good will be done.

As there is no English examination, for admission, I believe, to either Oxford or Cambridge; this seeming neglect can perhaps be understood.

No. 148.

I had not the advantage of being trained, under any such system of schools, as that of primary, grammar and high school, in this country. Almost all my schooling was obtained at a large private establishment, (some four hundred boys,) in the north of London, where my father left me when he came to settle here. The principal was a delightful man, for whom every boy had the sincerest personal regard, and whose general school system I believe to have been excellent, though deficient in some particulars, distinctly so, in English.

We started in the lower forms by learning a good deal of spelling, from a regular spelling-book, and did, I think every day, some simple dictation, the commas and stops being read out to us, as the reader proceeded. In the middle forms we dropped the spelling books, and wrote, about twice a week, longer dictation from standard authors. Whether, during these times, we were supposed to be involuntarily imbibing the style of the author, I do not know; I am quite sure such an idea never entered my head at the time, nor do I remember that the object of the work was, definitely, so stated to us. The dictations were always read over afterwards by the masters, and marked with a maximum of ten, anyone getting seven, or less, had to stay in and do the work again. They were marked partly for spelling, and fair writing, and partly for the observance of periods, the putting of capitals in the right places, etc. The spelling mistakes made by every boy in the form, both in the dictation and through out all his written work, were put together upon a list, and hung up in the form room. We were supposed to keep an eye on this list, as it grew towards the end of the week, and learn the words; for on Friday it was removed, and on Saturday dictated to us by the form master, when we were supposed to write it without error, and were punished if unable. Beside the dictation in the middle forms, we also had short essays to write upon given subjects, but so far as I know, we had no text book of composition, nor were the essays criticized in detail at all, but simply marked from ten down, and the errors crossed through in pencil. In the higher forms, spelling, dictation, and essay work, were all left behind, and our studies were confined

almost wholly to the derivation, and history, of the words of the language. The text book we used, was fully illustrated with extracts from standard works, to give the idea of proportion of Saxon to Romance words used by any author in any extract. There was now, however, no practise in writing English, as such, though written answers to questions on other subjects, were generally criticized for clearness of style. The construing of the classics was mostly done in class, in the hammer-and-tongs method peculiar, I was about to say to boys, but I fear it is not unknown at College. Provided a boy's translation showed that he grasped the construction it was passed, the use of idiomatic English not being insisted upon, though the master would often render again, idiomatically, a passage, which had been too completely mauled by the other method. Also, in any public examination we went in for, the English History and Grammar papers generally bore the legend, that composition, writing, and spelling, would be taken into consideration in awarding marks, though how we were supposed to acquire the composition part of it, I do not know — perhaps by some such process as the “unconscious cerebration” method, to which Mr. — is so partial.

Looking at the arrangements of this School therefore as a whole, two faults strike me as especially prominent.

First in the essays written in the middle forms, the giving of subjects by the instructors, instead of letting the boys choose their own. This resulted in the things to be written about, being such, as very few mortal boys, ever regarded otherwise than as necessary evils — such as “oil-painting” “music” and the time-honoured “Coal.”

Secondly, the lack of clear criticism is evident. I can imagine no better method, than that pursued in regard to our daily themes; for in the reading of a few selected contrasting themes, there is the living interest of listening to the other fellow's work, which would act quite as well, if not better, with boys: often, too, the mere reading of two themes well contrasted, is itself sufficient criticism without any elaborate consideration of principles, which tends to get dry to young boys. This sort of work, combined with the use of some good primer of composition, should render such a system as the one I went through fairly efficient.

The main fault I have to find however with my training in English, as with all my school work, was the want of apparent purpose throughout, so far as I personally was concerned. It seems to me a boy should be buttonholed somewhat in this fashion.

“Do you see that you are a member of a civilized community. Do you see, that it is to your interest, to learn to express yourself clearly, and accurately, in writing or speaking with your fellows? That it may be bread and butter to you, that it certainly is your only chance of a high standard of development? But perhaps you are content to be a mere log, dragged through life by circumstances? Or do you want to be one of those who can take a living, intelligent, interest in it? Because communication with others, is the only thing that can give you such an interest, and writing and speaking the only means to that communication.”

Through some perversity of things, a boy is expected to arrive at the knowledge, of the proper view to take of this work, by some

method of growth, like Topsey's and so generally regards school work, as a something he has to swallow, not taste, and this, just to please his people. He only learns the true point of view, when the opportunity for using it, is, as for most boys, left behind with his schooldays.

No. 149.

My first training in writing English began in the graded schools of [a large town in] Iowa. From about the fifth grade up we were required to write short essays of from two to three hundred words, about three times a year. These essays were corrected by the teachers and handed back to us to be rewritten.

When I entered the High School I was given a book upon English composition by Lockwood. It was a very good book for first year High School pupils, being simple and clear. During this year a short piece of writing was required every day, usually upon subjects tending to illustrate the rules laid down in the book for that day's lesson. Sentences and paragraphs which were incorrect and mixed up, were given the class, and the pupils were required to write the exercise correctly.

After the first year in the High School, no more regular themes or written work was required of us. We went off into reading writers of English, beginning with Irving and Longfellow and ending with Milton and Bacon. The only writing we did now was in the shape of essays which were required about six times a year.

In the translation of Latin in this school we were required to be excessively literal and were not allowed to translate freely or into the English idiom. In French we were encouraged to produce as polished and well-formed translations as possible.

I think the course in English given in the first year of this high school was very good and certainly as far advanced as was suitable for pupils of thirteen and fourteen years old. After the first year the English courses given were certainly very defective as far as writing English is concerned. Had the writing of daily or semi-weekly exercises been required through the whole four years course, introducing a more complete text-book (such as Hill's principles of Rhetoric) toward the end, I believe I should have come to Harvard knowing something of English composition. Toward the end of the course, longer and more difficult compositions should have been required of the pupils and above all, the written exercises should have been carefully criticized and the pupils made to rewrite them.

I will say that the schools [in question] are among the best in the state and Iowa prides herself upon the fact that she is second only to Massachusetts in the excellence of her public schools. I say this that the neglect of proper instruction in English composition prevalent throughout the west, may be seen.

Even in the colleges of the west English literature and English composition are sadly neglected. I went from the — High School to [an Iowa] College. Here I found that *no English whatever* was taught until the last year of the college course. At this place, I did some work upon the college paper but, in the absence of

intelligent criticism, my work could only be the practise of what principles of writing I already knew.

Returning from College, I worked as a reporter on a daily newspaper for six months. In this work I did a great deal of rapid, slipshod writing and acquired a habit of carelessness of expression which I have found very hard to break.

I think that the student entering college should be, at least, as far advanced in writing English, as he is after completing the course called English *A* in Harvard College. I think the student in the preparatory schools should have much practise in writing English and above all should be made to rewrite all his compositions under criticism.

No. 150.

For the first three years of my school life, I had of course, the ordinary teaching in reading, writing, spelling, and short composition work, which every boy, from ten to thirteen years of age, has to undergo. This work was very elementary. Although the teachers were good, at that age, not very much progress could be made.

After graduating from this primary school, I went to [a New York] Free Academy. This is one of those delightful schools, which are under the supervision of a board of uneducated politicians, or friends of politicians, who are very careful to have own friends as teachers, and not to let any "newfangled" ideas come into the system. This system was good enough for them, twenty years ago, why should it not be good enough for the boys of to-day?

As English is a language of so much less importance to Latin, Greek, French, and German, it is not necessary to have a teacher of it at the Academy. The result of this is, that, during my first year there, my course in English was under the German professor. During my second year [the] professor of science of all kinds, had charge of the "Advanced English Course." This gentleman, although a fine scientist, and a very popular man was never intended to teach English. When he returned me my compositions, I took them home, and my father corrected both my mistakes, and [the professor's].

One more year I remained at the Academy. This year things were a little improved. Professor —, a graduate of Harvard, who has had charge of the classical department of the school, and been principal, since our fathers went there, took us in hand. Although, perhaps, the brightest man in the city, a man of great intelligence, and refinement, and an excellent scholar, both in classical and English studies, he had been too long in his place to make a good teacher of English. His methods were those of thirty years ago, altered and hampered a little by the ridiculous rules of the school board. As I remember, the entire work of the year was reading Julius Caesar, and writing half a dozen themes.

Getting a little impatient of this old fashioned method of carrying on a school, I left the next year, and went to [a New England Academy]. Here I looked for a change for the better and found it in everything except English. To be sure Mr — was a young man, a recent graduate of Harvard, and supposed to be a very fine

English student. If he were the latter, he should be congratulated on the excellent manner in which he concealed the fact. Now and then he would give out the book to be read for the next recitation. When the day for this came around, he would have a copy of the book before him, and the hour would be spent in each fellow reading aloud a certain number of pages, while Mr — followed him, and asked questions. For a while this kept the boys doing their reading, but, at last, they found that Mr —'s questions were all from the notes in the back of the books, and that he knew nothing about them except what he learned from these, and the reading suddenly stopped. As to writing, we did it at —. Yes, we really had a theme due nearly once a month. In the lower school the penalty for disorder was writing so many lines for each mark. Upper classmen, however, were exempt from such lowly occupations, and I had entered the sixth. After such "good and sufficient preparatory training," is it strange that my mark in admission English was *E*?

No. 151.

In the Junior class [of Southern State College] we studied Genning's Rhetoric and did almost no theme work. Our professor supplemented the recitations with sharp lectures of his own, and being a most ardent rebel — and never "reconstructed" — and directed by the artful question of a shrewd but unstudious pupil, he frequently was led to dilate on the excellencies of the style of John C. Calhoun or Jefferson Davis. It was but a step from the style to the character of the hero, for our professor held that "the style is the man," and soon would we have presented to us with convincing logic the logic of the lost cause.

Our best training in writing English came from another source. All Juniors and Seniors had to write and deliver four orations a year. These were a source of great profit to the whole college. It must be understood that all the students were required to attend the chapel exercises held every morning and that very few of the men desired to be absent. At this exercise the roll was called, a selection of scripture was read, one or two hymns were sung, and prayer was offered. After these were over, the president stepped forward, made the announcements for the day, and closed his remarks by saying, "We shall have an oration this morning from Mr. Blank; subject, 'Result of the Crusades,' or whatever it might be. Mr. Blank, who had been trembling in his boots now came up on the platform and for the next ten or fifteen minutes held forth to his two hundred and odd fellow-students. When he was through and had received his due applause, his speech was criticized by the professors. First, the professor who taught the Junior rhetoric criticized the speaker's choice of words, his sentences, and his style generally. Next the professor who taught Mental, and Moral Philosophy, Logic, and Political Economy, criticized the subject itself, the matter of the discourse, the logic, and the arrangement of the parts. Each professor, for all teachers were professors, was called on in turn to make a comment and most of them responded in a two or three minutes talk.

In some of the courses in English Literature themes were occasionally required. In other courses, often in History and rarely in Greek and Latin classes, essays were written. In translating little regard was given to the quality of the English tortured out of the classic texts.

As to the actual training in writing, the composition courses were far inferior to the work in the English language and literature. In — College, as seems to be true in the Southern schools generally, the courses in English composition were not thoroughly organized nor systematically conducted. Daily theme work, the best training in English was unknown.

No. 152.

My early training in English was marked by the lack of that important feature, theme writing. When I entered the high school at home, in Indiana, we were told that we should write three compositions during the first half year. I remember what fun we used to have in reading them before the class. The English in them was poor, indeed, but they were never corrected by the professor. He was an excellent writer of English himself, but I don't know why he never saw the necessity of teaching it to his pupils.

The work in English for the whole three years in the high school, was mainly confined to "studying literature," a thing I never understood. The professor would take his book, walk over and sit down in front of the class, look wise, make a few sage remarks, and then ask some poor unfortunate to stir up the depths of Pope's Essay on Man, or Emerson's Compensation. I remember one day how he berated me for giving a wrong conception of a verse in Tennyson's Locksley Hall.

In the second year we studied Rhetoric two days in the week and "Literature" on the other three. The only good that I ever got out of my English, in that school, consists in the broad extent of good English which I received as a basis for my future reading. Although I did not get the conception that he wished me to, yet I could enjoy the fine ideas conveyed by those masterpieces of English Literature.

At our graduation, we each had to write a theme of eight hundred words, although we had had no training whatever, to train us for it. Thus we were supposed to be giving in these themes at the end of our course, a sort of "resume" of our three years training, when, in fact the professor had more the writing of them, than we ourselves. We were instructed to hand in the name of our essay, and on his approval of it, we were to write our theme upon that subject. That was the last we had to do with it. He corrected it, cut out what he pleased, and put in what he pleased. Then that was supposed to be the result of our efforts.

The one great feature in training pupils in English, I think, is practice in writing English. It is an accomplishment which few have, but which all need. Too many schools lack this training, but it is becoming a more universal feature in all our schools, every year.

My study of English can be divided into four periods which are distinguished by the different schools that I attended ; English in the common schools ; English in the Academy ; English in College.

From six years of age to fifteen, I attended the districts schools of Vermont ; there I learned the rudiments of English. The books used, were Patterson's English Grammar, the American Spelling Book, and Franklin's Readers. The class read this set of "readers" in fixed order ; when the last of the set was reached, the class read and reread again and again the last of the set. No such thing as an idea of literature ever entered the head of a district-school committee. I remember that one teacher tried to introduce a course of literature and began by giving Goldsmith's *Deserted Village* to the class. But the illiterate old foggy of a school committee, shaking his bald pate and slyly winking his eye, said : "I've got a "schoolmarm" down in "destrict" number three, whose come home from the academy with new-fangled notions in her head ; but I "reckon" she'll get 'em out "afore" the terms over." She did lose those "new-fangled" notions ; she was powerless to oppose the opposition of parents and committee. Our course in literature was at an end ; we returned to the old reading-book and reread it, until we knew "Sparticus to the Gladiators" as well as we knew the Ten Commandments.

During this period of ten years, I had almost no practice in original writing ; perhaps I wrote ten "compositions" in the ten years. Most of these were read aloud ; and thus the teacher never saw the written work. The criticisms were on the subject matter and not upon the form and structure of the English. I hope that I have made it clear that this period of study gave me but poor preparation for the struggle that came when I entered the Academy.

The second period of study was spent in a different State where more modern ideas of teaching English prevailed. For four year I studied [in a New Hampshire Academy]. Professor —— object in teaching English is to prepare men for the entrance examination to Harvard College ; he told us the fact on the first day and four years later ended his "goodbys" by giving directions how to pass the examinations most successfully. If I said no more, I should do him a great injustice ; he did often forget those formidable examinations and dwell on the purely literary side of his subject.

The class used Hill's *Foundations of Rhetoric* throughout the four years. The manner of using the book was as follows : he explained the principles involved in the lesson at one recitation, and at the next gave slips, on which were printed the incorrect examples of the book, to each student ; the student, then, wrote the corrected example on the blackboard. We read in class all the books required for admission to Harvard College in 1895, except Scott's *Abbot*. We, also, did a large amount of memorizing of selected passages. We memorized Gray's *Elegy* and Goldsmith's *Deserted Village* entire, and many long selections from *Evangeline*. *Courtship of Miles Standish*, *The Traveller*, *Marmion*, *L'Allegro*, *Il Penseroso*, *Comus*, and *Lycidas*, and doubtless many more that I have forgotten. The examination work was based upon the contents of the *Rhetoric* and the writing of

these memorized selections. I remember writing only one theme, which was a summary of the Courtship of Miles Standish. I am sure I did not write four themes in the four years.

In College, I have taken English A; I am now taking English 31; it is in the light of this work that I now speak. The first period of study, that of the common school, can be quickly summed up; the method of instruction had no commendable feature; in the ten years, I learned the rudiments of English only imperfectly. The second period of study, that of the academy, had much good in it. I learned that the style of George Eliot is better than that of the multitude; in fact, I got a little knowledge of what literature is. It also, had a negative value in composition; for, from the study of Rhetoric, I learned what was wrong. Both periods failed in that they gave me absolutely no teaching in original writing. The common and the preparatory schools should have theme writing just as the college does. Let them adopt Horace's motto: "*Nulla dies sine littera.*" Let them translate it as I have done for English 31; "That day is lost on which I write no daily theme."

No. 154.

I went to a classical school in England, where no English was taught in the higher forms. In the lower forms the boys had to learn by heart celebrated selection of verse together with a small amount of grammar. If, however, on entering you were not placed in the lower forms—and this generally happened to a boy of thirteen of average intelligence—you received no training in English as English. During the summer and Christmas vacations books and plays by celebrated authors were given to the whole school for study. The majority of boys in the upper forms read them through quickly, as any novel, and the younger boys tried to shirk their task contenting themselves by hearing the outline of the story told the night before examination by one of their more studious comrades. Prizes were given for the boys who passed the best examinations but the winners were generally considered to be "grinds." On Sundays questions pertaining to Biblical subjects were asked to be answered on paper. These questions, however were not meant as an exercise in English but as a way of acquiring a thorough knowledge of the Bible.

At the Christmas and Summer examinations we were required to write a two hours composition on some subject given out at the time of examination. This I suppose is the only training I have received in writing English. I suppose that boys were expected to pick up a knowledge of the language by the study of the language, but personally I did not obtain much benefit from it as far as I can see. I find that, through lack of training, I have difficulty in expressing my thoughts and in conveying to the reader the ideas I have in my head. I think that exercise in theme writing, such as I get in English A, would have been most beneficial to me. Had I previous exercise I think that the ease and fluency which I find so hard to get now would have come naturally for practice makes perfect in all things.

I prepared for College at the High School [of an interior] Illinois [city].

Our instruction in writing English began and ended with the course of four years. During the first year, I believe, we wrote one theme each week and chose our own subjects; the themes were corrected and handed back, with a grade marked on them. Frequently we were compelled to read our themes, as object lessons. During the second, third, and fourth years themes were due, with criticisms of style of various authors whose works were studied and read in class as the subjects, due at the times we finished our readings of those authors. But during the fourth year we were also required to write critical essays on works read outside of school. In addition to this, during the last three years of the course, essays and various literary compositions were written for recitation at the weekly meeting of our societies. Our efforts in that line were carefully criticized and materially assisted by a corps of teachers in whose hands such work was left.

Looking backward, I have an impression that the main defect in the preparation, was the infrequency, during the last three years of the course, of essays and compositions. Not enough stress was laid upon the benefits that would come from long practice, combined with careful observation both of defects in our manner of expression, with the ways to remedy them, and of the pleasing qualities of style which were to be commended and carefully studied in the best authors for the purpose of giving to us means of expression and lofty ideals of beauty in writing.

Most of this instruction in writing was given us, and well taught, but not so strongly insisted upon as to make a firm impression upon me.

The English training which I received was given in California schools, and so was different from that in the Eastern States. The primary object in the instruction was to prepare pupils for the entrance examinations of the two universities there, Stanford and the University of California. As these examinations differ greatly from those of Eastern colleges and universities, the method of teaching in the preparatory schools also is different.

The English entrance examinations of those Western colleges call for a thorough study of the books and also of mythology rather than for an ability to write English. Accordingly, the object with which we studied English was to be able to give the meaning of all allusions, to explain all the figures of speech, and to parse any phrase in the books we had had. The writing we did was confined almost exclusively to paraphrases with once a great while a synopsis of some part of our reading.

I think, on the whole, that the training required for the Harvard examinations is the better of the two, though in California schools, where Latin and Greek are studied comparatively little, some attention must be paid to English classics. However I regard the art of

writing as of rather more importance than the critical study of books, since, while the latter is often forgotten and seldom very profitable to the possessor, the former is a necessity to anyone who wishes to express his thoughts or opinions. So, I think that, if a great deal more attention were paid to the writing of English in the schools which I have mentioned, it would be a great benefit to the pupils.

No. 157.

I left the [Michigan city] High School at which I prepared for College with a diploma admitting me to the University without examination, but with absolutely *no* training in writing English, as such. As High School pupils were supposed to know how to spell and punctuate correctly — these being considered the only ends to be attained in good writing — before leaving the schools of a lower grade, there were no classes in composition. There was, it is true, a class in Rhetoric for Juniors, meeting daily during the first term of the year, and studying a Miss Somebody's "Rhetoric." A certain number of pages of this valuable work had to be learned for every recitation, but not a word of writing, original or otherwise, was ever required. I have no idea what was taught in that class, as no immediate or conscious use was made of the principles which we must have learned by heart.

Incidentally we received a modicum of practice in the composition of good English in those dubious exercises commonly called rhetoricals. These unspeakable things occurred during the last term of our Junior year, the class meeting once a week to listen to essays from the girls and "orations" from the boys. At stated intervals during the last year of the course also, the boys appeared before the whole school to deliver their slumber-inviting messages. In composing these doubtful pieces of English we received some training, but we were criticised merely on our "thought" and "delivery," while nothing was ever said about the English of our productions, the primary object of this exercise apparently being to make speakers and thinkers rather than writers. We received some little blind practice out of this, of course, and in so far the exercise was of value. In addition to this work, however, we should have had at least one course in English Composition, where the principles of writing good English had been dealt out in homeopathic doses, and where daily — or at least thrice-weekly — themes had been required. Doubtless in an elementary course of this kind it would not have been feasible to make these daily themes more than a sentence or a short paragraph in length, — say not longer than a page of note size, — but the length is not the point. In this work of writing English the daily practice under intelligent criticism is the desideratum, and not an iota of this did I have in all my preparatory course. The same is true of my four years college course which I took before coming to Harvard.

I was brought up in a country town in northern Massachusetts, and in the "district school" in that place I never experienced those objects of terror which are known to children as "compositions." As a child, I had shown a great fondness for books and study, and at a suitable age I was sent to [a neighboring Academy] to fit for college. This Academy, fifty years ago a flourishing institution, has been, for some years past, steadily deteriorating; its original endowments have long since been exhausted, and the school is now doing little else than striving to maintain its existence. From this it will readily be inferred that the methods and courses of instruction are very much out of date and entirely inadequate for modern college preparation. The school is, in a word, utterly out of touch with modern educational progress.

While I was at this institution I never heard the subject of training in English mentioned, nor was I required to write more than once on that occasion producing a so called "thesis" for graduation. The catalogue named as one of the subjects of study "English Composition," but I never knew what was the nature of the subject. Toward the end of the senior year the students who were preparing for college read the books named in the entrance requirements in English. Once a week we recited the main points of the stories. There was no criticism, no study of style and no writing about the books.

After what I have said, I am now in a position to state that I have absolutely no notion of the methods employed in the preparatory schools for the teaching of English Composition. It is a source of great regret to me that I can give no opinion upon the questions which I have been asked to consider, but the fact remains that a nonentity can neither be in any sense defective nor admit of any improvement.

REPORT OF THE COMMITTEE TO VISIT THE LAWRENCE SCIENTIFIC SCHOOL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee to visit the Lawrence Scientific School had intended to make a thorough report on the condition and prospects of the School on this the fiftieth year since its foundation. To assist in framing such a report the Dean has furnished the Committee with detailed statements from the different departments. These show with great uniformity that there has been an amazing increase in the attendance at the School during the past few years and with this a corresponding and ever increasing demand for more apparatus and teaching force, and for more class rooms and laboratories. The work of collecting a large number of students is accomplished. How to supply them adequately with what they have come to seek is the urgent question in all departments. The Lawrence Scientific School is at this moment afflicted with prosperity.

While these statements were being prepared there have been conferences between Committees representing the Governments of the University and of the Institute of Technology regarding some method of using their respective forces to the best advantage and without waste of energy. As discussion on such a subject is now in progress your Committee have felt it necessary to defer the report that they had contemplated. It would have been a statement of the great growth of the School and of the many and pressing needs of the various departments. It seems to us that in many instances to satisfy these needs is practically but to duplicate apparatus and instruction already provided at the sister institution. Such a duplication is surely necessary if two rival institutions are to be maintained. But practically the same people in this community are interested in and have control of Harvard University and the Institute of Technology and continued rivalry between them results in an absurd waste of power. Common sense seems to point to such an alliance of forces or division of work between the two institutions as will do away with the suspicion of any contention and will turn the resources of both seats of learning to the production of the most good. The fact that such an alliance is now under discussion leads your Committee to think that this immediate time is not a propitious one for urging on

the graduates of the Lawrence Scientific School or on the public the varied needs of the School that are suggested in the reports prepared by the instructors, pressing as these needs are.

They feel it, however, to be their duty, as it is their wish, to urge as strongly as possible upon the Board of Overseers that they lend any weight they can towards such an alliance between the institutions as may concentrate their powers, so that the field may be covered by united forces working in harmony instead of by rivals. The subject is now before the two Governments, and this is the time to press it and to settle it. With the wish of endorsing and urging this cause, your Committee submit to you this report.

Yours very truly,

ROBERT S. PEABODY,	}	<i>Committee.</i>
MORRILL WYMAN,		
ELIOT C. CLARKE,		
ERASMUS D. LEAVITT,		
JOHN LAWRENCE,		
A. LAWRENCE ROTCH,		
CHAS. H. MANNING,		

JUNE, 1897.

LXXIII.

REPORT OF COMMITTEE ON PHYSICAL TRAINING,
ATHLETIC SPORTS, AND SANITARY CON-
DITION OF BUILDINGS, 1898.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee renews its recommendations of last year as to the desirability of a course of required physical exercise for the Freshman class and offers the following vote for the consideration of the Board:—

Vote: That the Faculty be requested to consider the advisability of introducing at Harvard some system of required physical exercise for the Freshman class similar to that now adopted at Yale and at other colleges.

AUGUSTUS HEMENWAY,
ROBERT BACON,
C. F. ADAMS, 2D,
G. F. WELD,
R. F. CLARK,
MAURICE RICHARDSON,
H. W. PUTNAM.

} *Members present
at meeting of
Committee.*

LXXIV.

REPORT OF THE COMMITTEE TO VISIT THE JEFFERSON PHYSICAL LABORATORY AND DEPARTMENT OF PHYSICS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE :—

The undersigned members of the Committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the laboratory building on Thursday, March 10, 1898, have the honor to report as follows :—

During the past year, the routine work of lecture-room and laboratory instruction to more than four hundred undergraduate students has been performed most satisfactorily; and, in addition, the Director and his associates, in coöperation with several post-graduate students, have made a series of original investigations the results of which are valuable additions to physical and electrical science. The more noteworthy of these investigations are :—

1. An investigation of high electromotive force, up to more than a million volts; by the Director, Professor John Trowbridge. This investigation has resulted in the discovery of anode rays; and the revelation of the travel of discharge of high electromotive force over the surface of fairly good conductors. The initial resistance of air to such discharges is less than one thousand ohms.
2. An investigation of the properties of magnets, with respect to their use in exact measurements; by Professor B. O. Peirce.
3. An investigation of the heat conduction of rocks; by Professor B. O. Peirce.
4. An investigation of the relaxation time of dielectrics; by Mr. H. H. Brown, under the direction of Professor B. O. Peirce.
5. A study of the air thermometer; by Mr. H. Edwards, under the direction of Professor W. C. Sabine.
6. An investigation of wave lengths in the ultra violet region of the spectrum; by Messrs. Theodore Lyman and E. H. Colpitts, under the direction of Professor W. C. Sabine.

7. An investigation of the heat conductivity of iron; by Mr. C. H. Ayres, under the direction of Professor E. H. Hall.
8. An investigation of the "Hall effect" in liquids; by Professor E. H. Hall.
9. Investigations in sound, with particular reference to the improvement of the acoustic properties of lecture rooms; by Professor W. C. Sabine.

The extent and importance of these original investigations bear witness to the zeal and ability of the Laboratory staff: and it should be noted that much of the work connected therewith has been done outside of the hours for regular University service.

The Committee are of the opinion that in maintaining a physical laboratory there must be met the same competition that is met in the development of a commercial enterprise; and that standing still is equivalent to drifting backward. In connection with this subject, it should be noted that the equipments of the physical laboratories at both Chicago University and Columbia University have been so much extended during the past year that the Jefferson can no longer fairly claim more than the third place in the list of physical laboratories in United States.

As to buildings, the Jefferson Physical Laboratory still easily heads the list; but it seems to this Committee that the reputation and the welfare of Harvard University demand that at least five thousand dollars be appropriated for the immediate purchase of such additional apparatus as will warrant her claim to the possession of a working laboratory of the first class.

FRANCIS BLAKE.

A. LAWRENCE ROTCH.

BOSTON, MASS., 12 March 1898.

REPORT OF THE STANDING COMMITTEE TO VISIT THE LAW SCHOOL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Standing Committee to visit the Law School met in the rooms of the Overseers on January 12, and, after an interchange of views, agreed that those members whose engagements permitted should make a personal inspection of the School on the following day, and that the Committee should afterwards hold a joint meeting with the Law Faculty in Austin Hall. This plan was carried out, and the proposed joint meeting resulted in a very interesting and instructive discussion as to the prospects and needs of the School.

The Harvard Law School is in a condition which it might be misleading to call "critical," but which certainly demands immediate and careful consideration from the governing bodies of the University and from its alumni: this condition may be briefly described as one of serious embarrassment as a result of unexpected prosperity. When it first occupied Austin Hall, in September, 1883, the number of students was 150, for whose instruction four Professors and one Assistant Professor sufficed, and no reason then existed, or, at all events, none was apparent, to apprehend that its accommodations would prove insufficient for many years to come. Its rapid growth has, however, falsified all expectations, however reasonable: at present it contains 546 students and employs eight Professors beside an Assistant Professor and two Instructors for special subjects; it has already outgrown Austin Hall, notwithstanding the considerable addition made to this some years since; a continuance of its recent rate of growth will soon render the Hall totally inadequate. The report of the Dean for last year says on this subject:—

"The continued growth of the School, notwithstanding its change into a graduate department of the University, has upset all our calculations. Instead of the anticipated loss of at least 60 and possibly 100, in the first year after the change, there has been a gain of 80 in the total registration. The unprecedented number of entries this year makes it probable that the School will not have fewer than 500 students for some years to come, for it seems impracticable effectually to check the resort to the School by further restrictive measures."

The Committee were surprised to learn during their joint meeting with the Law Faculty how seriously a resort to "further restrictive measures" had been contemplated merely with a view "effectually to check the resort to the School." One plan looking to this end, which has been discussed, established as a requirement for admission, for graduates of all colleges except Harvard, that the applicant should have stood in either the first three-fourths or the first half of his class at college. An investigation of the college standing of 244 out of the 257 graduates of other colleges connected with the School during the present year (it having proved, for various reasons, impracticable to ascertain the facts as to the others) disclosed that the first test would have excluded only 16 and the second only 47, so that, as the Dean says, a "restrictive measure" of this character would not "effectually check the resort to the School," whilst it would be probably regarded as involving an injustice, as well as a hardship, to some of those excluded. It is obvious that a man might well be in the last half of a graduating class at some one of the eighty colleges represented in the Law School, and yet exceed both in natural abilities and in acquirements another applicant for admission who had been graduated in the first half of his class at another of these colleges. This is strikingly exemplified by the results of the same investigation as applied to Harvard graduates in the Law School. It was found that the exclusion of those in the last quarter of their respective classes would shut out 60 of the 227 such graduates now in the School, and the exclusion of those in the last half, 106. It is true that these figures are not wholly trustworthy, since they are based on the assumption that the rank of Harvard graduates of '97 fairly represents the rank of those from other classes, but they suffice to show that such a test of admission as has been suggested would involve a discrimination against colleges having a high standard of instruction. This fact seems to the Committee to constitute a decisive objection to its adoption. It also appears to a majority of the Committee that the qualifications of a young man to pursue with advantage to the community the study of Law are not indicated with any near approach to certainty by the rank which he may have held relatively to other students during his college course: some of the most promising law students, as well as some of the most successful lawyers, have shown little aptitude for or little perseverance in study until, at the commencement of their professional training, they realized the necessity of preparation for the serious business of life. This argument must not be, indeed, pushed too far, for it is doubtless also true that some men who are not college graduates or

otherwise able to meet the requirements for admission might, in exceptional cases, prove to be better students and more successful lawyers than those now in the school; nor must the Committee be understood as objecting on principle and in advance to stricter requirements for admission, should these be deemed advisable in future, provided that their purpose shall be to raise the standard of instruction in the School, and not merely or primarily to retard its growth.

It was, indeed, urged at the joint meeting, to which allusion has already been made, by a member of the Faculty whose views are entitled to great weight, that a reduction of the number of students at the Law School, or, at all events, a restriction on its further growth, however obtained, would be desirable in itself, as tending to insure a better instruction for those admitted; and that the obligations of the University to the country would be more obviously and satisfactorily discharged by maintaining an exceptionally high type of legal education than by annually graduating from the Law School an increased number of students. These views then received the entire assent of one member of the Committee, and others among those present, who could not agree with them, yet recognized their force; but, to a majority of the Committee, and, we think we are justified in adding, to a majority of the Law Faculty also, it appeared that to refuse admission to any young man fully qualified to receive with benefit the instruction given by the School would be, if not a breach of trust, at least a very regrettable limitation of its efficacy for good.

It being admitted that the Law School must provide for all those college graduates who wish to enter it and can afford a reasonable guarantee of their fitness to profit by its training, and that the number of these is likely to increase, and perhaps to increase rapidly, in the near future, it has become necessary and even urgent that it should be prepared for this task. The Dean says further in his report: —

“This wealth of numbers is not without its embarrassments. In all the first year subjects, and in the large electives of the second year, the classes should be divided into two sections. This division necessitates an increase in the teaching staff and an additional lecture room. The spacious reading room in Austin Hall is likewise much too small for the students now in the School.”

The Committee believe this to be, on the whole, a decided understatement of the School's immediate needs, and, unless its growth shall be in some way retarded, a much greater increase in accommo-

dations than is here suggested as desirable, will be obviously indispensable within so short a time that provision for this increase should, as a matter of ordinary prudence, be made without delay. This can only be done either by the employment of the surplus earned by the School, or by an appeal to the enlightened liberality of its alumni and friends. The surplus is still doubtless a considerable sum, notwithstanding the heavy expense incurred in enlarging Austin Hall: it is estimated that about \$170,000 will be in the hands of the Corporation by September 1, 1898, arising from the profits of the School. The Committee would see, however, with much regret this fund applied, wholly or in large part, to the construction of a new building. The endowment of the Law School is very moderate: the aggregate of the Dane, Bussey, Royall, Weld and Bemis Funds amounting, according to the report of the Treasurer for the past year, to but little over \$200,000, and more than three-fourths of its income during that year having been derived from tuition fees. The Committee regard this situation as unsatisfactory for an institution of the high and, as yet, well sustained pretensions of the Harvard Law School; and, moreover, as is hereinafter explained, they deem a considerable increase in the numbers and perhaps a readjustment of the salaries of the Faculty, necessities even more vital, if somewhat less pressing, than the enlargement of its accommodations. The Committee therefore recommend that the Overseers, by a resolution, direct attention to the immediate need of a new building for the Harvard Law School: for this, we may add, if no title be chosen by its donors, no better name could surely be found than "Langdell Hall."

Attention has already been called to the fact that while in 1883 a Faculty of five members were charged with the instruction of 150 students, at present a Faculty of nine members (for the two Instructors are not fairly to be counted in this comparison) undertake the instruction of 546 students: the Committee regard this change with great solicitude. The peculiar system of instruction which is identified with the Harvard Law School, although it has been to a greater or less extent adopted by the best law schools elsewhere throughout the country, presupposes classes of moderate size. A law lecture of the old type may be as well given to 500, indeed, if the acoustics of the lecture room be good enough and its size sufficient, to 5000 as to 50 or 25; but, when every student is expected to answer and encouraged to ask questions tending to insure a thorough-going comprehension of every feature of reported adjudications on the subject under consideration, the merits of this form of teaching become

illusory if more than a certain number are in attendance. Moreover, the Committee think that personal supervision by the instructor of each individual under his charge and opportunity for advice adapted to the peculiar circumstances or special needs of the student are of the greatest importance if we would be sure that every graduate of our Law School shall have seriously studied the law and really learnt some part of it, not merely listened to a certain amount of talk and read a certain number of printed pages relating to legal subjects. The Committee found some difference of opinion among the Faculty as to the number who might be included in a class without detriment to the instruction received, but they feel confident that the best results cannot be reasonably expected, under ordinary circumstances, if the audience much exceeds 50, and that with teachers and students of not more than average ability this number could be with advantage reduced. Entertaining these views, the Committee feel bound to express their deliberate opinion that an immediate increase in the number of the Faculty is highly desirable, and they would see with pleasure as large a portion as possible of the existing surplus devoted to the endowment of additional professorships. Two such professorships seem to them almost as necessary as a new building, and the institution of three or even four seems to the Committee no more than a reasonable provision for wants almost certain to be felt in the immediate future.

The Committee are, however, no less decided in their view that any addition to the present teaching force of the Law School would be unwise until the right man shall be found for each place to be filled. The Law School has been made what it is by its Faculty : an increase in the Faculty's number, accompanied by a deterioration in its merit, would be the worst possible service to the School. It is therefore a matter of grave importance to determine how the Law Faculty shall be recruited, and this subject has engaged a considerable, though not, as they think, a disproportionate share of the Committee's attention. The system of instruction adopted at Harvard makes it impossible to rely, as is done elsewhere, upon Judges of either the Federal or the State Bench or upon members of the Bar in active practice as teachers : a Professor at our Law School must make the teaching of Law substantially the business of his life. The School therefore competes, not only with other Law Schools throughout the country, but with the Bench and Bar for its Faculty. At the joint meeting of the Committee and of the Faculty it was stated that in every class which for several years past had been graduated from the School there had been at least one student who might have been at

once employed with every promise of success as an Instructor in the Law School; and it is probable that the Faculty will be hereafter recruited in great part from young men who prefer the scientific study of the Law to its active practice and the career of a teacher to that of an advocate. On the other hand, it appears to the Committee, and they found this view shared by the Faculty, highly desirable that some members of the latter body should have had actual experience in the work for which their pupils are preparing, and it is to be hoped that the School may from time to time secure the services of men who, after a creditable, if not necessarily a brilliant, professional career of greater or less length, become convinced, while yet in the full enjoyment of their mental and physical vigor, that the opportunities it offers are better adapted to their capacities or to their tastes. In any event, however, it seems to the Committee quite clear that, if the Law School wishes the services of first-class men, it must be prepared to pay them what such services are worth in the market.

To aid in fixing their market value a comparison of the salaries heretofore and now paid in the Law School with those received by Judges of the Federal and State Courts may be of service. In 1847 Professors Greenleaf and Kent, who then constituted the Faculty of the Law School, each received \$3,000 *per annum*; at that time Associate Justices of the Supreme Judicial Court of Massachusetts were paid precisely the same amount, and those of the Court of Common Pleas, the predecessor of the present Superior Court of that State, were paid \$1,800. At the present time a Professor in the Law School receives at most \$5,500 *per annum*, an Associate Justice of the Supreme Judicial Court \$7,000, with \$500 additional for traveling expenses, and one of the Superior Court \$5,500, with the same allowance. It thus appears that, in point of salary, Professors of the Harvard School stood formerly on an equal footing with Associate Justices of the Supreme Court of the State where they live, and on one decidedly superior to that of the like members of the Court of immediately subordinate jurisdiction; they now stand, at best, upon the same footing with the last named Judges, and upon one decidedly inferior to that of those first named.

When Professors Kent and Greenleaf received \$3,000 *per annum*, Judges of the New York Court of Appeals were paid \$2,500; now the Associate Judges of that tribunal receive \$10,000 *per annum*, beside an allowance of \$5 *per diem* for expenses when away from home. It must be remembered in this connection, that Mr. Kent came from New York to accept a Professorship in the Harvard Law

School. Associate Justices of the Supreme Court of the United States are paid \$10,000 *per annum*, Circuit Judges \$6,000, and District Judges usually \$5,000, beside receiving allowances for expenses; and, since 1869, Judges of all three classes have been entitled to retire on full salaries after ten years' service, and upon attaining the age of seventy years. The necessity for a very large increase in the compensation of Federal Judges has thus been both clearly and practically recognized since 1857, when Mr. Justice Curtis resigned from the Supreme Court, inasmuch as he received only \$4,500 *per annum*, and there was then no provision for an allowance upon retirement.

This last feature in the situation of the Federal Judiciary renders their position peculiarly attractive to the very class of men among whom the Faculty of our Law School might be with great advantage recruited. Those who relinquish an active career at the Bar, give up with it, under ordinary circumstances, the hope of accumulating during the years of their greatest vigor a competency for their old age; and an assurance of support when superannuated held out to every deserving professor would unquestionably have great weight with one called to a Chair in the Law Faculty. The following extract from the President's report seems to the Committee very pertinent in this connection:—

“The Retiring Allowance Fund (\$319,972.29 July 31, 1897) enables the President and Fellows to provide appropriate retiring allowances for a few persons. In 1896–97 three gentlemen were in receipt of such allowances; but as yet the Corporation feels unable to assume the responsibility of a regular system of retiring allowances, which would give the Corporation a right to retire any officer at a given age, and every officer a right to claim a retiring allowance at a given age. The University cannot get the full benefit of a system of retiring allowances in making University positions more desirable, so long as the award of an allowance depends in each case on a special vote of the President and Fellows. A right to a retiring allowance would greatly enhance the value of all University positions; whereas a possibility of receiving a retiring allowance by special vote enhances that value but little.”

It should be further mentioned in this connection that the salary of \$5,500 paid a Professor in the Law School is not ordinarily enjoyed immediately upon his attaining that rank. As the Committee understand the arrangement made in 1890, an Assistant Professor (who was then, and is still, paid, as such, \$2,250) was to receive \$4,000 upon promotion to a Professorship, \$4,500 after five years' service as Professor, and \$5,000 after another five years. How far, if at all, the operation of this sliding scale is modified by the recent increase of the maximum salary from \$5,000 to \$5,500, the Committee are not informed.

The Committee are not prepared to recommend any action by the Overseers regarding strictly financial matters, but they deem it proper to record their opinion that the compensation received by a Professor in the Harvard Law School, under existing circumstances, in view of the nature of his work, and in the absence of any systematic provision for allowances upon retirement, is insufficient to attract men of the professional eminence, learning and abilities needed to maintain the present high standard of the School. They entertain and express the hope that the financial situation of the Law School may permit the recent increase of \$500 *per annum* to prove a first step only.

Those members of the Committee who were able to attend the exercises of the School were happy to note the interest and apparent intelligence of the students, and the accuracy and care of the Instructors. Certain members of the Committee are disposed to regret that the students no longer plead up to an issue of law in the cases argued before their clubs, and that less attention seems to be paid now than formerly in the School to the study of Pleading at Common Law. The Committee are not, indeed, unanimous in this view, but the value of a thorough mastery of the principles of pleading in promoting clear and precise thought in legal discussions, and as a safeguard against loose conceptions and the uncritical acceptance of results from hasty generalizations as to the origin, meaning and scope of legal rules has been impressed by their professional experience upon some of its number, and they, at least, would see with pleasure a return to the former order of things at the School in this respect. This criticism, which, after all, is addressed rather to the students than to the Faculty, is the only qualification any of them would add to their unanimous and hearty recognition of its eminent merit and value to the legal profession and to the community.

All of which is very respectfully submitted.

CHARLES J. BONAPARTE,
Chairman,
 JAMES C. CARTER,
 ROBERT M. MORSE,
 H. W. PUTNAM,
 CHARLES C. BEAMAN,
 ROBERT GRANT,
 J. B. WARNER,
 LOUIS D. BRANDEIS,
 JAMES J. STORROW,

*Standing Committee
 to Visit the
 Law School.*

REPORT ON THE MEDICAL AND DENTAL
SCHOOLS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

Your Committee have the honor to report that the inadequacy of the present building for the needs of the Medical School is so serious a matter that some action has become necessary. This fact was recognized several years ago, and a number of meetings were held of a Committee, consisting of some members of the Faculty of the School and some members of the Visiting Committee, at which the subject was fully discussed and immediate action decided on. This decision was, however, modified at a subsequent meeting in view of the fact that no alterations or additions were practicable in connection with the present building which could be more than a temporary makeshift, and which would not be outgrown in a few years. Nevertheless these alterations would be very expensive, and it was held that if the community were to be appealed to for money at all, it would be unwise to ask them to contribute a considerable sum for a temporary modification of the old building, when it was evident that, in a few years at most, it would be necessary to appeal to them again for aid in the construction of a new one.

Action was therefore deferred, and as your Committee believe, wisely deferred, in order to await events and to see whether the increase of value of the land on which the building stands, an increase necessarily largely dependent on the character of the buildings erected in the neighborhood, would be such as to justify its sale. Since that time no marked change has occurred, and in the meantime the need for more room inside the building has increased very much year by year. The need for enlargement was urgent then: it is now imperative.

An increase in room sufficient to relieve immediate need could be obtained at the minimum of expense by the erection, on the vacant ground on each side of the Sear's Laboratory, of a one story building of corrugated iron, or such other inexpensive construction as would afford adequate protection against the weather without increasing the danger of fire. Such a building could be lighted by sky-

lights, if desirable, and would not be high enough to interfere with the light of any of the adjoining rooms of the School.

Your Committee recommend that such buildings be erected at once.

Another point to which your Committee desire to call attention is the arrangement of courses in the Medical School and the employment of the students' time.

This question is one of the great problems of modern education and is not confined to medical teaching. The enormous growth of science during the last two or three decades has made many of the single branches so vast that a life-time might be spent in learning each one of them; while the development of specialties in medical practice, and the necessity of having each thoroughly taught for the benefit of such students as intend to follow it, has tended to throw out of perspective, more or less, the various parts and elements of which the general education, common to all practitioners, must of necessity be made up. It is nearly twenty-five years since Professor Huxley said that the great problem of the day in education was not what to teach students, but what not to teach them, and this problem is comparably more serious now than it was then.

No conscientious instructor who is thoroughly acquainted with his subject can see, without grave regret and even something like self-reproach, the student leave his course possessed with only a fraction of the knowledge which he himself has and which he would be only too glad to impart if time permitted; and in every large school the actual division of the studies is practically largely determined, in the last resort, by a compromise between the apparent claims on the students' time of the various departments, which, again, may be dependent in part on the urgency with which these claims are presented. It is impossible that it should be otherwise. The student is, therefore, during his brief years of medical study, placed in a trying position. There undoubtedly results a certain definite survival of the fittest; but — and this is the point — *it is the survival of the fittest to survive under the given conditions and not necessarily of the fittest for the use of others.*

Your Committee feel that any steps that might be found possible toward the diminution of the amounts of *required* studies in the School, while leaving the fullest opportunities accessible to special courses, would be in a measure of benefit to, and be hailed as a relief by both teachers and pupils. And, further, they believe that it would be to the advantage of both teachers and pupils if some of the required courses could be more nearly approximated to the minimum of essential knowledge.

It has been said that applied therapeutics should be taught in the Clinical Courses in the Hospitals and Dispensaries. This is true; but it is not enough. Notwithstanding the excellent lectures on Clinical Therapeutics now given in the departments of Clinical Medicine and Theory and Practice, the School would still, in our opinion, be strengthened by the establishment of a separate chair in Therapeutics, additional to all the valuable and indeed indispensable instruction detailed further on. A mature, judicious general practitioner would be the proper person to fill such a chair.

Your Committee hope that the Board of Overseers will favor the passage of an amended Anatomy Act soon to be presented in the Legislature. It is a vital question for Science.

CLINICAL MEDICINE.

There has been no change this year in the amount or method of instruction in the Department of Clinical Medicine. The course in Infectious Diseases given in the South Department of the City Hospital for the first time last year has been and will be continued. The Fourth Class, in divisions of eight or ten men, thus have, in the second half-year, the precious opportunity to become practically familiar with scarlet fever, measles and diphtheria instead of going out into practice with only a book knowledge of these common and important diseases. Such an opportunity can be afforded by but few medical schools in this country.

Plans are under consideration to still further increase the clinical facilities for the Fourth Class, and it is hoped that efficient means to this end may be secured before long. The main difficulty is the fact that the School does not control the appointments and terms of service in any hospital. The position, even of a welcome guest, is not just the same as is that of a proprietor. There are good grounds for the belief that the clinical advantages in the Harvard Medical School are second to none in this country, but there is still room for improvement. The personal work of both professors in the Department has been interrupted in the current year by illness, but all the assistants have stepped into the breach with cheerful and efficient service, and there is no reason to believe that the students have suffered.

THEORY AND PRACTICE OF MEDICINE.

The principal change in this department has been the addition of a lecture by the Professor in charge of the Fourth-Year students, an addition made at the request of the students themselves. The work of the department seems to be very satisfactorily conducted.

Dr. D. W. Cheever reports : —

I have attended lectures, and held personal interviews with the heads of each department assigned to me to visit in the Medical School.

My general impression is of intense activity and of great progress in teaching in Anatomy, Surgery, Clinical Surgery and Pathology, and of a much more thorough instruction in *Materia Medica* than I had supposed. Whether or not a due perspective is observed as to the teaching and importance of the subjects can only be determined by comparing this with the reports on the other departments of the School.

Anatomy is taught in the whole of the first year; the whole of the second year; and a part (elective) of the fourth year. One hundred and seventy-six (176) lectures, and thirty-six (36) recitations are given.

The dissecting room is supervised by six qualified Assistants, each of whom has charge of eighteen students. The latter are examined and quizzed on their work three times a week; and the Assistants spend two to four hours a day in the dissecting room, in turn. The student dissects at least two parts the first year, and one the second year. An accurate record is kept of every student's dissection, and he may be conditioned in it. He has demonstrations on the subject by the Demonstrator, and also instruction in sections, by the Assistants, daily, in October, November, December, April and May. Once a week the Instructor in Anatomy holds a formal recitation on the lectures through the first year. Three and one-half weeks are consumed in dissecting each part, and discipline and care are strictly enforced. There can be no waste.

In the second year, eight students who have reached grade *A* in the Anatomy examination, are given much larger privileges in dissecting for the lectures, under the name of Prosectors.

In the fourth year there are two elective courses in Anatomy, covering three months; and in these the student dissects three parts.

Thus, those who wish, can refresh all their anatomical knowledge before graduating. There is then no lack of abundant instruction on the cadaver, but there is never a surplus of material. The supply of anatomical material has not kept pace with the growth of the School, and certainly not with the greater demands of a more thorough instruction.

Comparing the period when I was Demonstrator, 1860 to 1868, with the present, we find in 1896 that anatomical material had

increased seventy-five per cent., and in 1897, only *fifty* per cent. Meanwhile the classes have increased from 200 to 250 students then, to over 500 now.

In addition to this the valuable courses on operative surgery consume much anatomical material. A full course of eight exercises is given before the whole of the third and fourth classes in Surgical Operations, on the dead body, and an elective course for the fourth year of fifteen exercises, where each student has one half of a cadaver for operations. These privileges attract many students from other schools; but this year, dearth of material has obliged four students to share each cadaver.

A still more serious demand for material is made for the Dental School. Hitherto, dental students have been required to dissect one part; now they are obliged to dissect two parts. It will be impossible to carry this out unless the supply can be increased, and here, in my judgment, the pruning knife should be applied and economy practised. The other alternative is the hope of securing such changes in the Anatomy Law before the Legislature as will make the furnishing of dead bodies to medical schools, and to *them only*, *mandatory*, where it is now permissive. This should apply only to those dying and being buried at public expense and not claimed by friends. Extreme care is taken to respect all private feelings now in our Medical School, and a decent burial of all remains is strictly enforced.

The lectures in Anatomy are illustrated by most complete and admirable models, plates and preparations, the theme is succinctly and carefully handled, and the teaching clear and concise. We observed, with regret, at the lecture at 9 A.M., that although the entire class, or about 160 students, attended, there were very many late in entering. These late comers entered until 9.35; the lecture ended at 9.55; thus, there was only twenty minutes of absolute quiet.

SURGERY.

The course covers three years. Beginning the second-year class, this year is devoted to the scientific part of surgery, to practical details and to laboratory work, and recitations. Surgical Pathology is the chief feature.

There are recitations in Surgical Pathology by Dr. C. A. Porter at the Massachusetts General Hospital. There is a laboratory course on Surgical Pathology by Dr. E. H. Nichols, and there are clinical demonstrations of this course at the City Hospital by Drs. H. L. Burrell or J. C. Munro; there is a course on apparatus and

bandaging (to sections) by Drs. Munro and Porter. An endowment of \$5,000 has been made for Dr. Nichols' laboratory course on Surgical Pathology.

Third Year. The very important field of Surgical Pathology having been thus provided for, the student enters on a systematic course of lectures by Dr. J. C. Warren, fifty-one (51) in number; fourteen recitations keep pace with the lectures, in proportion of one to three. There is also a clinical lecture each week, and at each hospital, illustrating the didactic lectures.

Of the fifty-one lectures twelve are on fractures and dislocations, but the newer fields of surgery receive large attention, as evidenced by ten lectures on the abdomen (including hernia) and five on the head and spine.

Every student is required to see, observe, follow up and report on a case of fracture. Half the class go to the Massachusetts and half to the City Hospital. Drs. Scudder and Monks supervise this very important branch. There are visits in each hospital, in three or four sections, once each week.

In the fourth year, there are lectures, systematic and clinical, on genito-urinary surgery, throughout the year by Dr. F. S. Watson; and a course on ovarian tumors by Dr. Homans.

CLINICAL SURGERY.

A Clinical Surgical Conference is held by Dr. C. B. Porter once a week at the Massachusetts General Hospital; cases are written up and reported by third-year students, and criticized. This is a very popular course, and the papers have much improved in character.

Minor Surgery is taught to sections of ten students, at each hospital, in courses of two weeks, in the out-patient department. This is eminently a course of personal instruction. This lasts from October to May. Clinical visits are made in the wards of each hospital in sections of twenty, weekly.

In the fourth year, in both the Massachusetts General and City Hospitals, clinical lectures in the amphitheatres are given to one half the class, weekly. Clinical diagnosis is taught to sections of one fourth the class, weekly, in each hospital. This course lasts from October to May. The subjects treated are: Diagnosis, Sterilization, Medico-legal examinations, Surgical Therapeutics, and Feeding.

Major surgical operations are done, especially on public operating days, in each hospital, once a week.

A course in Emergencies and Accidents is given to small sections, at the Massachusetts General Hospital every evening, for the fourth year. On the completion of the new surgical buildings this course will also be given in the City Hospital. There remains also for the fourth year the course on operative surgery, twice a week, for two months, by Dr. Porter, and finally, fifteen exercises where the fourth year students operate themselves on the cadaver, from two to four students on each body.

A more complete course than that combined in Surgery and Clinical Surgery, could hardly be devised. It covers the second, third and fourth years in the Medical School. First, Surgical Pathology, both by text-books and by laboratory work; second, Bandaging and Apparatus; third, Minor Surgery, in small sections; fourth, systematic lectures and recitations in Surgery; fifth, a case of fracture; sixth, Clinical illustrations and lectures; seventh, Genito-urinary Surgery and Ovarian and Abdominal Surgery; eighth, the Clinical Conference; ninth, Clinical Visits; tenth, a course of drills in diagnosis; eleventh, a course (practical) in emergencies and accidents; twelfth, Operative Surgery taught by the Professor, and finally performed by each student.

PATHOLOGY.

The new and well equipped laboratories for pathology in both hospitals offer great facilities, and have awakened much enthusiasm in this important branch.

Pathology is a second year course, but some advanced instruction in autopsies and in pathological histology is given in other years. Two lectures in general pathology and pathological anatomy and one recitation are given throughout the year. A course (practical and laboratory combined) is given twice a week by Professors Councilman and Mallory, Doctors Wright, Nichols, and numerous assistants, through the year. The class is divided into six sections, or groups, around long tables, and morbid specimens are shown, described to, and handled and examined by each group. The instructors go over the specimens six times in one hour. This recalls Virchow's celebrated course in Berlin. Twice a week there is, in sections, a drill in pathological histology, with specimens, description for fifteen minutes, each student making drawings of specimens for forty-five minutes.

Autopsies are held in both hospitals, and the student is expected to attend *twenty*. Advanced students are also allowed to make

the autopsies. Professor Councilman thinks *ten* autopsies at least should be required, for graduation.

There is a summer course to advanced students, or graduates, by Professor Mallory, which could be indefinitely expanded, and which this year has attracted eleven applicants from the Johns Hopkins School.

Professor Councilman sums up the needs and future of his department, as follows: —

1. A Clinical Laboratory for Pathology in the Medical School building.

2. A hospital attached to the School, where the student could follow the case in the Clinic, and even follow the fatal case in all the details of an autopsy, thus connecting clinical and pathological instruction; and also, where in surgical cases he might be able to see the tumor before operation and after operation in the pathological laboratory.

3. The development of private and post-graduate courses, and of publications.

In this connection it may be noted that Baltimore, Philadelphia and New York already have hospitals attached to and controlled by their Medical Schools. It is also a gratifying fact that in Boston, Dr. Sears has continued his benefactions to the Sears' Laboratory by a gift of \$500 a year for the library and for publications, and that this year he has generously donated one thousand dollars.

We must not lose sight of the fact that the Contagious Department of the City Hospital has added to the Pathological department of our School unrivalled facilities for the study of the bacillus of the anti-toxine of diphtheria.

MATERIA MEDICA AND THERAPEUTICS.

Lectures and recitations are held twice a week, the whole of the second year. Laboratory work, six exercises (pharmacy) two hours each, in sections — Dr. Harrington and Mr. Jordan; eight demonstrations in experimental therapeutics by Dr. Pfaff.

The first half-year, lectures on drugs. The second half-year, recitations, drills, prescription writing, in public; inspection and handling of drugs and preparations.

No subject can be more barren in awakening enthusiasm than *Materia Medica*. We must bear this in mind in any criticism on the course.

In the systematic lectures, the following order is observed: *Drugs* — (1) officinal preparations and doses; (2) physiological action; (3) therapeutic uses.

On these lectures there are sixteen recitations. The *important* synthetical medicines are described, but not others. Prescription writing, in Latin, is practised on the blackboard by four students at a time, during many hour exercises. Incompatibles, inert compounds and poisons are especially illustrated and drilled on. In the laboratory exercises the students, in sections, make tinctures, powders, mixtures, pills, personally for two hours each lesson, under the direction of Professor Harrington and Mr. Jordan, from the College of Pharmacy. This is an extremely valuable and popular course. I would advise its being enlarged at the expense of the lectures.

The course on experimental therapeutics is of an advanced character, and includes original observations by Dr. Pfaff.

Professor Harrington's well known ability as a public expert in adulterations of food and his valuable courses on hygiene, render him especially reliable in teaching.

THE DEPARTMENT OF THERAPEUTICS AND HYGIENE.

Dr. Morrill Wyman reports: —

The Therapeutic Laboratory has accommodations for eighteen students: they come in divisions. A number of officinal drugs and chemicals sufficient for the purposes of practical pharmacy are properly arranged. Prescriptions are written in accordance with the United States Pharmacopæia; the medicines are weighed, compounded and carefully put up with all the directions as to dose time, vehicle, date and signature.

The most approved methods of dispensing medicines are also taught—as flat compressed pills, in capsules or wafers, but in a much more acceptable form than we used to see them and flavored to taste. They make the taking of drugs under some conditions almost a fine art. The laboratory is largely attended and the teaching much valued, as is all real instruction.

No one preparing for the medical profession can over-estimate the value of physical training. Anatomy, the study of the machine; physiology, the machine in motion, are the work of the laboratories. The art of observation, the medical education of the senses, as it has been called, is more valuable as a mental training than all didactic lectures. It is the best training for the practice of medicine as an art, as a science, and for research. Laennec made and carefully recorded

nearly 400 autopsies before the sounds heard on the chest by his medically educated ear, were connected with the morbid changes within. Auscultation could have been invented in no other way.

Physical training is essential, from the physical examination of the chest at the clinical conference to the composition and dispensing of the appropriate remedy in the Pharmacy. Dr. Harrington's publications exposing some of the impudent frauds practised upon the public by the vendors of "Extracts of Malt," "Commercial Lithia Waters" and "Food Nostrums" deserve the thanks of all who have any regard for the public health. The papers are short, spirited and to the point. It is hardly to be hoped that they will prevent quackery, but they give people fair warning of the imposition, if nothing worse, to which they are exposed. Some physicians, thoughtlessly it is to be hoped, by their recommendation or qualified approval have aided this kind of imposition.

His experiments with formaldehyde as a surface disinfectant, undertaken under very considerable difficulties, deserve much credit. They must have been carried on *inter taedia et labores* of a revolting character with patience and circumspection. His conclusions seem to have been carefully drawn and its value, except as a surface disinfectant, considerably modified from what was at first assumed for it.

OBSTETRIC DEPARTMENT.

The hospital at No. 24 McLean Street—The Boston Lying-in-Hospital—is the most interesting department in the teaching of obstetrics. It is here that a large part of the clinical instruction is given.

The hospital building is interesting in another point of view. Here is a hospital evolved from a block of city habitations with few indications towards the object to which it was to be devoted. It is an object lesson our students would do well to study. Here were rooms not very prepossessing, which by slight but well devised changes became, one the Delivery room, another the Recovery room, and a third, a Convalescent room, each with simple appropriate, easily cared for furniture, neat and clean; add to these a sterilizing room and we have the most essential parts of a hospital. The Delivery room may be the model, to be approached as near as may be by the Externe, during his assigned term of service, and a kettle of boiling water his sterilizer, even among the poorest of his patients.

At this hospital our students receive instruction either as house physician or Externes. Of the six house physicians three are constantly in attendance and are required to reside in the hospital,

where they are furnished with breakfast, other meals being provided outside the hospital; they are appointed for six months.

Our students are required to take charge of at least six cases of labor, to receive clinical instruction on at least one of them, to care for their patients during the convalescence and to make full written reports of the cases.

Externes appointed by authority delegated by the Trustees of the hospital are under the immediate charge of the out-patient House Physician. Students who are assigned to take charge of out-patients during their confinement are expected to devote their whole time to the hospital work during their term of service. They are not allowed to perform obstetrical operations. They are provided with printed blanks to be carefully filled out, with which they can communicate by telephone or otherwise with the Senior House Physician, who is always on duty at the hospital and will answer the call at once night or day. Externes must visit their patients twice daily for the first three days, and at least daily for the three following days, and return to the hospital a chart of the temperature and pulse at each visit.

The administration of the hospital seems to be carried on with great exactness of detail. The pulse and temperature, the two most important elements in forming a correct judgment of the condition of an obstetrical patient, are recorded twice daily from the time of her confinement until she leaves the hospital. These records are kept and bound in volumes in a manner most readily accessible; each has a copious index of principal symptoms. Those students who follow out the course laid down for this hospital with proper care cannot but form habits of discipline in the exact observation and recording of results that may go with them through their professional lives.

One hundred and thirty-two house officers have completed their terms of service in the hospital and received the Corporation's diploma; clinical instruction has been given to more than 150 students annually in the houses of the poor to the advantage of both practitioner and patient. Since 1881 the students of our school have treated 11,142 cases as out-patients during their confinement, with but nineteen deaths — less than 1 in 500. Those who remember the rate of mortality previous to 1881, before the antiseptic treatment was adopted, can read this statement with heartfelt gratitude.

GEORGE B. SHATTUCK,
For the Committee.

APRIL 4, 1898.

THE DENTAL SCHOOL.

Your Committee find that the Dental School is in a prosperous condition, and that much good work is being done there. The requirements of the entrance examination are greater and the fees are higher, and yet the total number of students was greater during the past year by 29 than ever before. The building now occupied by the School on North Grove Street has been renovated and in some particulars made more convenient. There have been very few changes in the staff of instructors.

GEORGE B. SHATTUCK,
For the Committee.

APRIL 4, 1898.

LXXVII.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

GENTLEMEN,—I have the honor to report to you, as Chairman of the Committee to visit the Bussey Institution, that the Committee have inspected the several departments of the Institution, and have endeavored to familiarize themselves with its condition.

The Committee are of the opinion that the courses of instruction in farming, gardening, floriculture, landscape work, forestry, etc., there offered, are especially complete and far reaching; indeed, all branches of instruction, that in any way bear upon the several subjects taught at “the Bussey,” which Harvard University has established, are open to students at the Bussey Institution so far as they can be availed of.

It seems to the Committee that the opportunities afforded are too little known to the people who could profit by them, and for that reason are not taken advantage of as much as they deserve.

The Committee therefore recommend that your Board consider whether steps cannot be taken to make the opportunities offered more generally known, believing that a greater development of the usefulness of the Bussey Institution, in connection with the advantages offered by the Arnold Arboretum, would exercise an important influence for good throughout Massachusetts, and beyond her borders.

The Committee recognize that there are details, as to the Greenhouse, and experimental Barns, and certain equipments in several departments, which could be made much more complete and commodious by generous gifts from interested persons; but, until the attendance has increased, it is not felt wise to say that such improvements are imperative.

It is, however, a fact that the Instructors and students are creditably persevering in their work under such disadvantages.

For, and with the approval of, the Committee to visit the Bussey Institution,

FRANCIS H. APPLETON, *Chairman*.

APRIL 25, 1898.

LXXVIII.

REPORT OF VISITING COMMITTEE ON ENGLISH LITERATURE.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

Owing to the absence of the last year's Chairman in Europe, no meeting of this Committee was held until April 20, 1898, when a meeting was held at the Probate Office in Boston and was attended by Judge Grant and Messrs. C. L. Wingate and T. W. Higginson, the latter of whom was elected chairman in place of Mr. H. E. Scudder, resigned. A subsequent meeting was held in Cambridge (May 10) for conference with the Department of English. On this occasion thirteen instructors were present, with Messrs. Grant and Clapp of the Committee, besides the chairman. The head of the Department of English, Professor Wendell, was unfortunately absent in New York, where he was detained for some weeks by the severe illness of his father; but Professor Hill presided and there was a good deal of frank and cordial conversation, followed by an interesting visit to the now flourishing Child Memorial Library.

The members of the Visiting Committee were furnished with full schedules of exercises in the various Electives in English. The chairman attended three exercises conducted by Professor Hill, two by Professor Kittredge, and one each by Mr. Gates and Mr. Fletcher, besides several of the debates under the auspices of the Department. This gave the opportunity for a brief inspection, not merely of some of the larger and more elementary classes, but some of those more advanced and necessarily smaller.

Differing as one may, here and there, from the treatment and choice of subjects of Professor Hill, his lectures yet remain, as they have long been, the most salient and characteristic features of the Department of English. It is a rare privilege for students to be brought in contact with so fine an example of the critical spirit, joined with such candor, with so little of the spirit of mental tyranny, and with such power to win the attention and confidence of young men. This is aided by the simple colloquialism of Professor Hill's manner, and by his habit from time to time of calling for a show of hands as to the books and authors with which his hearers are

familiar. The excellent practice was also followed of placing on the blackboard the names of the chief authors treated, with the main dates in their lives and those also of the publication of their chief books. These lectures had the rare quality of being alike interesting to both beginners and veterans in literature; and they suggested the question, at times, whether the younger hearers knew how thoroughly good they were, and how valuable a model they afforded of real and broad criticism. Yet the attention was in general excellent and the students (perhaps 150 in all) seemed to recognize that they were laying a foundation for their real work, this course (28) being "introductory to the other courses in English Literature." The taking of notes was quite general—it must be remembered that the best scholars are not always those who do this most regularly—and there was very little of that bored look which is often so freely manifested by ingenuous youth. It was easy to fancy that some things said by the speaker would be remembered through all their lives by the hearers, as where they were cautioned that they must cultivate the qualities which make the style before they could have the style; or where, in more detailed criticism, the lecturer defined Macaulay as "a reading animal"; declared Carlyle to have been, in spite of appearances, more influenced by Goethe than by Richter; and while pointing out the tendency to "digression and want of unity," in Lowell, yet called attention to the fact that the essential kindliness of his nature made him sometimes, as in the case of Thoreau, qualify and almost take back his censure as he came toward the close of his criticism. All these were examples not of mere traditional talk, but of mature and original suggestion.

In passing to the classes of Professor Kittredge, one felt the magnetism of an ardent and somewhat impetuous nature, saturated with knowledge and overflowing in its communication; too eager for the truth to take much time in the precise measurements of shallowness or bombast, and thus giving at times the appearance of a rather abrupt and off-hand decision where there was, in fact, no time for anything more. The invariable readiness of his answers had an evident fascination for his hearers, and there seemed no visible reason why they should not, without any conscious effort of his in that direction, regard him as inexhaustible in knowledge. Certain it is that all the traditions of the professor as a sleepy and inert type of human being must be abolished for any student who has ever spent an hour under Professor Kittredge.

The recent introduction among English electives of "Course 8," bearing on Nineteenth Century Literature, has met with so cordial

and ample a welcome among students that it must certainly have a bearing on the future tendencies of the Department. It has sometimes been a ground of criticism on the Department of English at Harvard that it did not tend to create a sufficient enthusiasm for literature, but the success of English 8 — filling with students the large hall of the Fogg Museum — shows this reproach to be now, at least, unjust. The course ranges from the publication of Wordsworth's Lyrical Ballads (1798) to the death of Tennyson (1892) thus covering a century of development; and as it includes, though to a very limited extent, American authors, it really offers to young men a rapid review of all the writers now most discussed and nearest to their own time. It necessarily covers, to some extent, the same ground with the lectures of Professor Hill, as already described, and reaches, though necessarily in a more superficial way, a still larger number of students: perhaps 300 in all.

It remains to be seen whether the success of this course will not ultimately develop the Department in that direction which has been found in some other universities to be wholly practicable; the express study of the distinctive qualities of American Literature as such, its relation to our form of government, natural scenery, climate, social habits, mode of education and historical traditions; thus expanding into an independent course the theme touched very briefly and incidentally in English 8 and English 28. Nothing can be asked better than the analysis and criticism of the leading American authors, in these courses; the only question is whether the especial influences which developed those authors do not demand a more systematic attention, as indicated above. Some such addition to the present electives is in the opinion of the Visiting Committee desirable.

THOMAS WENTWORTH HIGGINSON,

For the Committee.

MARCH 15, 1899.

LXXIX.

REPORT OF THE COMMITTEE TO VISIT THE
BOTANIC GARDEN AND BOTANICAL MUSEUM.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

There is little that need be added to the full report made to the President of the University by the Director of the Botanic Garden, and printed in the Annual Report of the President. The new greenhouse, paid for by an anonymous friend, is excellent and attractive. Mr. Oakes Ames, who was appointed Assistant Director, has done excellent work, and will remodel some of the greenhouses this season. Another anonymous friend supplies the means.

The collections in the Museum are interesting and valuable, and are carefully and admirably arranged. The annual expense of the Botanic Garden and Laboratories amount to about \$10,000. This outlay is met by the income from invested funds yielding annually about \$4,800—by the use of the garden house \$700, and sale of material to Radcliffe College, for botanical work, \$300, leaving a deficit of about \$4,200, which will be met by gifts assured for the year ending July 31, 1899.

ARTHUR T. LYMAN, *Chairman.*

For the Committee.

March 15, 1899.

REPORT OF THE COMMITTEE TO VISIT THE
JEFFERSON PHYSICAL LABORATORY AND
DEPARTMENT OF PHYSICS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The undersigned members of the Committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the laboratory building on Wednesday, March 15th, 1899, have the honor to report as follows: —

During the past year, the Director and his associates have maintained the routine work of instruction at its usual high standard of efficiency; and in addition have carried on a series of most creditable original investigations which may be summarized as follows: —

1. The Director has continued his investigation of electrical oscillations; and, by a transformation of the apparatus therefor, has been enabled to study electrical discharges of greater intensity and length than have hitherto been obtained in atmospheric air. The high electromotive forces necessary for this study are obtained by means of a storage battery of ten thousand cells which, by the action of original apparatus, yields an electrical tension of three million volts and sparks of from six to seven feet in length. It is not too much to say that Professor Trowbridge's methods and results in this investigation have awakened the admiration of the scientific world.

2. Professor B. O. Peirce and Dr. R. W. Willson have finished an important investigation on the thermal conductivity of poor conductors; and their work has become the standard in this subject.

3. Professor E. H. Hall has finished his investigation of the thermal conductivity of cast iron and published the results thereof in the Proceedings of the American Academy of Arts and Sciences for the present year.

4. Professor W. C. Sabine has been engaged upon researches in sound, with a view to the determination of important facts in regard to the accoustical properties of various shaped halls and lecture rooms. He has arrived at a method of measuring the absolute intensity of sound — a result never before obtained.

5. Mr. Theodore Lyman and Mr. E. H. Colpitts, graduate students, have succeeded in measuring the shortest wave lengths of light which have been hitherto detected. By exhausting the air from the space in which their apparatus is placed, they have opened a new field of physical inquiry which promises to give still more important results.

6. Mr. H. Brown, graduate student, has been engaged upon a measurement of the relaxation time of different dielectrics, and hopes to finish his work during the present term.

7. Mr. H. Edwards, graduate student, is still engaged upon an investigation of the air thermometer, of which mention was made in the report of last year.

8. Mr. J. E. Burbank, graduate student, is engaged with Professor Trowbridge on an investigation of the absorption of X rays by different gases.

9. Mr. T. C. McKay, graduate student, and Mr. J. C. Howe, Senior, have obtained some interesting results in regard to the energy developed by powerful discharges of electricity.

The apparatus used in connection with the above mentioned investigations bears witness to the efficiency of the laboratory machine shop. It is evident, however, that the services of an additional mechanic, skilled in glass blowing, would be of peculiar value. Almost all physical investigations demand work in glass; and it is extremely difficult to get such work done satisfactorily in outside shops.

The Committee note with pleasure the results attained by Dr. R. W. Willson, Instructor in Astronomy, in the design and construction of a large number of simple and inexpensive instruments by means of which students make practical use of the knowledge they acquire in his course. The value to students of so early and so intimate a relation established between theory and practice can hardly be overestimated.

Four hundred and twenty-six candidates for admission to College in 1898 offered experimental physics; and two hundred and seventy-

four students are taking the elementary course during the present academic year. The increased attention to physical science by students offering themselves for College, is largely due to the labors of Professor Hall.

At the invitation of the Chairman, the visiting Committee were accompanied by Dr. Mendenhall and Professor Michelson, who, by the subjoined letter, bear witness to the efficiency of the Jefferson Physical Laboratory:—

DEAR MR. BLAKE, — We were so much interested in the visit to the Jefferson Physical Laboratory, which, through your courtesy, we were enabled to make yesterday, that we desire to join in a brief expression of the gratification it afforded us, and of our appreciation of the great importance of the several investigations which are now in progress under the direction of members of the professional staff.

Professor Trowbridge's interesting studies of high potential discharges are known everywhere; but it was a pleasure to see that he is not content with having, some time since, surpassed all others in the magnitude of the effects which he is investigating. His new transformer by which he can produce a discharging spark seven feet in length through air, has already led him to most important conclusions; and under his skilful direction we may confidently expect, in the near future, further contributions which, like those he has already made, must be of profound significance to all interested in the subject. The carefully planned and successfully executed measurement of the velocity of electric waves, which is being carried out by one of the graduate students, is also a work of unusual importance. The same may be said of the investigation of short light waves in which measurements have been carried far beyond any hitherto made.

The scientific public is already informed concerning the research in heat conductivity recently carried out in the laboratory, under the direction, we believe, of Professors Peirce and Hall. We were privileged to see some of the apparatus with which this work was done, and the value of the investigation can hardly be overestimated. Few subjects are surrounded by greater difficulties, and the ingenuity with which many of them have been overcome is worthy of high commendation.

Perhaps nothing impressed us more than the investigation of Professor Sabine of the acoustics of halls and public buildings. This is a matter of the utmost practical importance, and the problems it presents have been attacked many times, usually with little or no success. We believe that it has never before been treated with anything like the ability and sagacity that is shown by Professor Sabine, who has dissipated many of

its perplexing difficulties by the use of rigorously scientific methods, together with a cleverness in instrumental devices and a dexterity in manipulation which cannot fail to be admired by all.

All physicists must be impressed by the noble building in which this work, and much more, is being carried on. Its admirably arranged rooms for special research are sufficient in number and of adequate dimensions to afford ample facilities for the great work for which it was designed; and it is to be hoped that the University will continue to afford means for the extension and enlargement of opportunity for original research for which it has long been distinguished. While the purely practical outcome of research work should never, in an institution like this, be considered of first importance, it is but fair to say that it will often happen that the successful conclusion of one investigation—for instance, such as that in which Professor Sabine is now engaged and which appears to be rapidly nearing that end—will be of more value to the world, from a pecuniary standpoint alone, than many times the cost of the building in which it is made, with its entire contents.

Faithfully yours,

T. C. MENDENHALL.

A. A. MICHELSON.

Boston, Mass., March 16, 1899.

MR. FRANCIS BLAKE, Boston.

The Committee are confident that this expert testimony by the President of the Worcester Polytechnic Institute and the Professor of Physics of the Chicago University will be peculiarly gratifying to the Board of Overseers of Harvard College.

FRANCIS BLAKE.

T. JEFFERSON COOLIDGE.

ELIHU THOMSON.

A. LAWRENCE ROTCH.

25 March 1899.

REPORT OF THE COMMITTEE ON ITALIAN.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

Two years ago, after a thorough inspection, we presented a report in which we pointed out the need of reorganizing the Department of Italian. Last year no report was made, as the Chairman received no official notice of his appointment. This year we desire to submit our previous report, and to urge its consideration by you. In 1897, 78 students elected Italian; this year, only 35 take the two courses offered. This falling off is partly due to the temporary popularity of Spanish courses, owing to the recent war, and partly to the failure of the proper authorities to organize the study of Italian at Harvard on a dignified, rational and progressive plan.

Turning to the University Catalogue, we find that, in other departments the small number of students is not regarded as an excuse for a slipshod and imperfect organization. In the Semitic and Indo-Iranian languages, for instance, *seven* courses were given last year for the benefit of only *sixteen* students, and to give those courses three full professors, among the most distinguished now in the University, were busied. If it be worth while to provide competent instruction in Assyrian commercial documents or Aramaic grammar, for the sake of less than three students to an elective, why, we ask, should Italian be slighted? Organize the Department of Italian properly, and it will vindicate itself.

One thing is certain, — it is not creditable to Harvard that among this year's electives no Dante course, that could be counted for a degree, has been offered. That our University, which annually provides nearly five hundred courses of instruction, many of them on the most minute or recondite topics, should thus neglect one of the three supreme masters of literature, is amazing. There ought never to be a year when Harvard students cannot study, under the best procurable teachers, Homer, Dante and Shakespeare: no multiplication of philological courses on third and fourth rate writers can offset the lack of adequate instruction in the few first rate masters.

Last year, when Professor Norton retired, it was announced that he would superintend the reading of a few advanced students of Italian, but that his course could not be counted for a degree. The

Department of Italian, instead of arranging for a Dante course to be given regularly in addition to this, seems to have thought itself absolved from its obligation to provide a course in advanced Italian; we think, however, that Professor Norton's course, being unofficial and voluntary, need in no wise conflict with any course which the Department, properly organized, would offer. Italian Literature cannot rank as it deserves at Harvard so long as the students who elect it are practically shut out from studying Dante. How should we judge the University of Padua if it offered two courses in English literature, but omitted Shakespeare? or the Sorbonne, if it excluded Goethe from its instruction in German?

In resubmitting our previous report, we urge, therefore, that the Department of Italian be properly reorganized, and that immediate steps be taken to remedy the discreditable neglect of Dante.

Owing to the absence in Europe of Mr. John Jay Chapman, the third member of our Committee, this report lacks his signature.

WILLIAM R. THAYER.

THOMAS WENTWORTH HIGGINSON.

23 March 1899.

REPORT OF THE COMMITTEE ON GEOLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Visiting Committee on Geology beg leave to submit the following report:

The condition of the Division of Geology appears to be on the whole satisfactory. The force of teachers is larger than in any other school in this country or abroad. They are doing effective work, as shown by the fact that quite one-half the field geologists of the United States Geological Survey have degrees from Harvard University, and probably more than half of the persons who have obtained professorships of Geology in this country within the last ten years are from this institution.

The needs at present are mainly for an extension of the work of the instruction on the following lines:

First, in the field of Mining Geology there is needed an additional instructor in Ore Treatment, and also the sum of ten thousand dollars to provide a plant to be installed in the large room of the Mining Laboratory, formerly the Carey Building, now known as the Rotch Laboratory. Such an instructor can be obtained for about twelve hundred dollars a year. There is also need of further instruction in the field of Oceanography. The course has been given by Dr. Daly this year. It is important that this course should be continued. There is need also of at least one additional instructor of high grade in Geography, attention being given mainly by the new man to Economic and Historic Geography. It is desirable also that the Division have proper installation for experimental work in Theoretical Geography. Instruction has been given in this branch and a considerable amount of apparatus provided, but owing to a rule recently made concerning the use of the University Museum, these laboratories must find quarters elsewhere. In the present condition of the University buildings no suitable place has been found. It would be very desirable to have a small building and sufficient equipment and some endowment devoted to this branch of research.

A good working collection of Economic Geology is very much needed.

It should be said that hitherto the cost of the Division of Geology to the University has been relatively small. Taking account of the number of persons to whom instruction has been given, it is perhaps less than that of any other division of the Faculty of Arts and Sciences. With limited means the Division has attained a foremost place. That it may maintain this place it is necessary that its resources should be extended in the directions above noted.

Respectfully submitted,

CHARLES FAIRCHILD.
GEORGE P. GARDNER.
RAPHAEL PUMPELLE.

31 March 1899.

LXXXIII.

REPORT OF THE COMMITTEE TO VISIT THE OBSERVATORY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee appointed to visit the Observatory has received from the Director of the Observatory a statement which is now submitted to the Board of Overseers as a report of the Committee.

For the Committee,

EDWIN P. SEAVER,
Chairman.

May 31, 1899.

FINANCIAL CONDITION OF THE OBSERVATORY.

The financial condition of the Observatory has undergone a great change during the last twenty years. The invested capital on August 31, 1877, was \$173,908.67, and for the preceding year yielded an income at the rate of 6.36 per cent. The total receipts of the Observatory were \$14,359.55. On July 31, 1898, the invested capital was \$825,699.30, and for the preceding year yielded an income at the rate of 4.37 per cent. The total receipts were \$46,175.46. Accordingly, during this time the principal has increased about four and a half times, while the income has increased three times, although the rate of interest has diminished by nearly one third. This remarkable growth in our resources has been attained in a great measure through the Visiting Committee of the Observatory. When appointed Director in 1877, I showed that a small addition to the income would greatly increase the efficiency of the work. The Committee accordingly secured by subscription the sum of \$5,000 a year, for five years, from seventy-two persons. While nearly all the members of the Committee took part in this work, its success was due to the unremitting efforts of three persons, Mr. Alexander

Agassiz, Chairman, Mr. J. Ingersoll Bowditch, and Mr. William Amory. At the end of the five years the Observatory seemed to be poorer than before, since we had learned how much could be accomplished by a moderate increase in its means. Accordingly, a second subscription of \$50,000 was undertaken by the Committee, the Rev. James Freeman Clarke, Chairman, also taking an active part. Not only was this sum obtained but the indirect results were even greater. Two gentlemen were asked to subscribe and both declined. It afterwards appeared that each made his will at about that time, and within a fortnight of each other, each leaving his entire fortune for astronomical purposes. Both of these sums, forming two of the largest bequests that have ever been made to astronomy, have now come into the possession of the Observatory. Mr. Robert Treat Paine, for forty-one years a member of this Committee, bequeathed his entire fortune, amounting to \$323,557.86, to this Observatory. Mr. Uriah A. Boyden left his property to Trustees, to coöperate with some institution, for the purpose of establishing an astronomical station at a high altitude and under the most favorable atmospheric conditions. One of the Trustees, Mr. James B. Francis, visited the observatories all over the United States, and was strongly advised to coöperate with the Lick Observatory, or with the Smithsonian Institution, but after a long correspondence and numerous interviews I was able to satisfy him that the means we had already secured would enable us to carry out Mr. Boyden's wishes better here than could be done elsewhere. Accordingly, this bequest, exceeding two hundred thousand dollars, also came to the Observatory. The next addition to our resources is one of the most important that we have received, in its objects, its results, and its amount. A member of this Committee, Mrs. Henry Draper, desiring to develop and extend the work so skilfully begun by her husband, established here the Henry Draper Memorial. Her gift of \$10,000 a year has enabled the spectra of the stars to be studied photographically, as was first done successfully by Dr. Draper, on a scale which has not been attempted elsewhere, and with results which in number and importance render it perhaps the most widely useful department of the Observatory. A Memorial has thus been established, in the most appropriate manner, which perpetuates the memory of the founder of this department of science. Without the Paine and Boyden Funds it is doubtful if the work of the Henry Draper Memorial could have been conducted more advantageously at Harvard than elsewhere. Each of these funds aids the other, and greatly assists in securing

new donations. Thus, when Miss Bruce of New York was asked to give us a photographic telescope of the largest size, it was easy to show that we had here appliances to attain with it the best possible results. Her gift of \$50,000 has furnished us an instrument for photographic research, far more powerful than any now existing elsewhere. Several other bequests have been received, the largest and latest of them, the Haven Fund, amounting to \$45,000. With the Boyden, Draper, and Bruce photographic telescopes many thousand photographs were obtained, which are of the greatest value, but if destroyed could never be replaced. Yet for several years we were obliged to store them in the wooden buildings of the Observatory, where they were liable to destruction in a few hours at any time, by fire. Again the Visiting Committee came to our assistance, and largely through the efforts of the Chairman, Mr. George O. Shattuck, \$15,000 was raised by subscription, and a fire-proof building was erected in which the photographic plates are safely stored, examined, and measured.

The Observatory has thus grown by successive steps until it now has organized departments for research, some of which are at least equal to those of any other observatory, either public or private, even including those maintained by the governments of England, France, Germany, and Russia. The work of the Observatory has increased more rapidly than its means. The number of assistants has increased from six to forty. During the first thirty years of its existence four volumes of its *Annals* were published and distributed, and three or four more were partially completed or ready for distribution. The total number of volumes is now forty. Besides the Station at Cambridge, the Observatory maintains a permanent Astronomical Station at Arequipa, Peru, where the atmospheric conditions are much better than at other observatories, with perhaps two or three exceptions. It also maintains seven meteorological stations in Peru, including the highest in the world, that on El Misti, elevation 19,200 feet. By coöperation with the Blue Hill Meteorological Observatory, the excellent results obtained at the three stations of that Observatory are published in our *Annals*.

The scientific work of the Observatory since its establishment has been in the direction of the physical properties of the stars rather than in merely measuring their positions. This line has been especially pursued for the last twenty years, and has developed fields of work that have not been taken up elsewhere. The station in the southern hemisphere enables researches on the northern

stars to be extended to the south pole, permitting all stars in the sky to be studied according to a uniform system. Thus, after measuring with the meridian photometer all the northern stars visible to the naked eye, the instrument was sent to Peru and similar measures were made of the southern stars. All stars north of -40° , of the magnitude 7.5 and brighter, have since been measured, besides several thousand stars of the eighth and ninth magnitude. About nine hundred and thirty thousand settings of about forty-five thousand stars have been made with the meridian photometer since 1879, and a more powerful instrument now enables stars of the thirteenth magnitude to be measured. Measures are also made of the light of faint stars every clear evening with the 15-inch Equatorial telescope.

Measures of position have not been neglected. The observations of a zone of 8,627 northern stars with the Meridian Circle, in connection with twelve other observatories, have been completed, and the results published occupy seven volumes of the *Annals*. The observations of a similar zone of southern stars are completed and good progress has been made in their reduction. Several photographic telescopes are kept in constant use, both in Cambridge and Arequipa, throughout the whole of every clear night. As a result about eight thousand photographs are taken every year, and the entire collection of nearly a hundred thousand plates are carefully studied by about a dozen assistants. These plates show the spectra of all the stars in the sky brighter than the tenth magnitude. They also furnish charts showing the condition of the entire sky several times every year, and contain a history of the visible universe during the last ten years. A striking illustration of the value of this collection is shown in the recently discovered planet Eros, which comes nearer to the Earth than any other known celestial body except the Moon. Its nearest approach occurs every thirty-seven years, the last time being in 1894, when no visual observations were obtained, since it was not discovered until five years later. Its path from October 1893 to May 1894 is shown by fifteen of our photographs, each of which also gives its position with an accuracy equal to that of a meridian circle. The laborious computation required in this search for Eros has been made for this purpose by Mr. S. C. Chandler. No photograph of Eros was obtained in 1893, at any other observatory. Other even more interesting objects may yet be discovered, and are doubtless contained on our photographs, since the latter cover the entire sky for the last ten years.

The results here described have been attained by rigorous economy, in spending money only to obtain results, and in no case for display. No money is expended on architectural effect, and in the buildings and instruments appearances are always sacrificed to efficiency. The salaries, especially those of the younger assistants, are much lower than their services deserve.

A serious question now arises regarding the future of the Observatory. It has attained a position among the great observatories of the world. This position, I believe, it should maintain, and I believe that Harvard University, and the people of the United States, desire that it should do so. If the Observatory is to do the work it did twenty years ago, its means are more than ample. If it is to do its present work, and maintain its present position, there must be no diminution in its income, but rather a steady, if gradual, increase. Unfortunately, the gradual falling off in the rate of interest affects a large portion of the resources of the Observatory. For this reason the income has been diminishing at the rate of a thousand dollars a year, for the last six years, and we are far from having reached the lowest point. One per cent. in the rate of interest means a loss to the Observatory of about ten thousand dollars a year. A diminution in income means abandoning work already undertaken, losing assistants at the very time when they have attained their greatest usefulness since their salaries cannot be gradually increased, and postponing the reduction and publication of observations already made. Such a course is the worst possible economy. Delay in publication often means a great increase of expense if material accumulated by one person must later be put into the hands of another, and often, as has frequently happened at other Observatories, a loss of the entire work.

In view of the wide interest in astronomy, and its numerous and generous patrons in this country, there are doubtless many persons who would gladly meet this need if it were properly brought before them. Unfortunately, the legacy tax of the United States, amounting in some cases to fifteen per cent. of an entire bequest, is likely to discourage gifts to science, instead of inducing donors to give during their lives.

As a remedy for these difficulties, it is suggested that the attention of the public be called to these facts by publication, and that the statement be made that it is desired to increase the capital of the Observatory by \$200,000, to compensate for the loss of income due to falling off in the rate of interest. If this amount cannot be

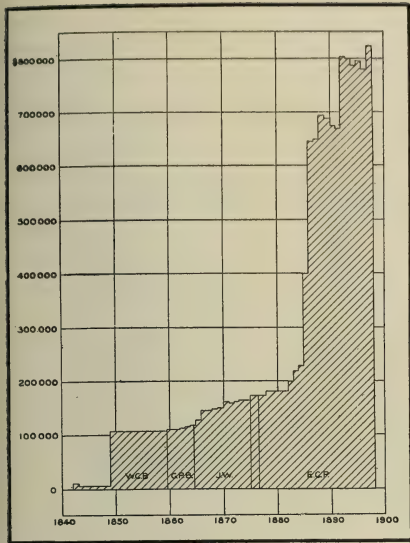
obtained the sum of \$50,000, if expended during the next ten years, would provide for the reduction and publication of a large part of the material now on hand.

The accompanying diagrams show the variations in the capital, in the total annual income, in the rate of interest on the invested funds, and in the number of pages published in the Annals of the Observatory, since its establishment.

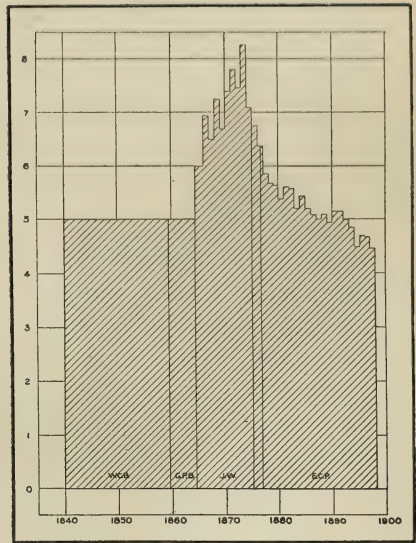
Respectfully submitted,

EDWARD C. PICKERING.

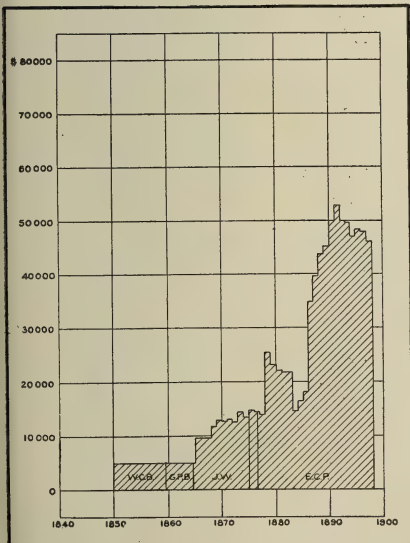
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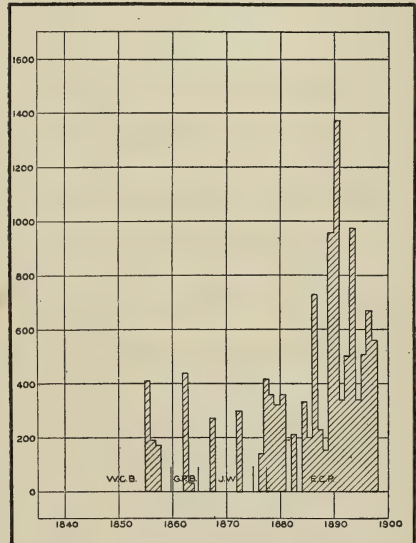
PRINCIPAL H C OBSERVATORY



RATE OF INTEREST HARVARD UNIVERSITY



RECEIPTS H C OBSERVATORY.



PAGES OF ANNALS H.C. OBSERVATORY.

LXXXIV.

REPORT OF VISITING COMMITTEE ON ZOÖLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee on the Department of Zoölogy respectfully report, that having been deprived of the services of two of its teachers, this Department needs additional instructors.

Professor Mark, Assistant Professor Parker, and Instructor Castle divide the teaching with a sufficient number of Laboratory Assistants: but another teacher of the higher grade is desirable, as soon as the proper person can be found.

Courses I, II, and III have been well attended:—

In '95-'96.	Course I	141	
" '96-'97.	" "	131	
" '97-'98.	" "	121	
" '99-'00.	" "	150	
In '95-'96.	Course II	53	
" '96-'97.	" "	45	
" '97-'98.	" "	48	
" '99-'00.	" "	40	
In '95-'96.	Course III	31	
" '96-'97.	" "	39	
" '97-'98.	" "	20	
" '99-'00.	" "	25	
Also '99-'00.	Course I	23	} from Radcliffe
"	II	18	
"	III	5	

These classes are largely from the Academic department; partly from the Scientific, and other departments. It is strongly advised that undergraduates about to study Medicine attend Course III, on the anatomy of the vertebrates and invertebrates, as well as Courses I and II.

If some way could be devised that these courses, and others in Chemistry and allied sciences could be counted in the term of medical study, it would be very desirable.

The very moderate fees received from undergraduates, together with the sum the Corporation can allow the Zoölogical Department,

apart from the Museum funds, is insufficient to provide adequately for the full instruction in Zoölogy, and an endowment would here be very useful.

The aquarium and vivarium need equipment, for there are now neither water, plants, nor living creatures.

Dr. Davenport's work on classification on a statistical basis, or experimental morphology, should be continued by a competent investigator. A half-course in vertebrate histology is needed.

A new half-course of instruction in ornithology is recommended; and that this mode of teaching be extended to other branches, thus making Courses in Systematic Zoölogy. There is urgent need of a publication fund for original researches.

Respectfully submitted by,

Committee. { DAVID W. CHEEVER, M.D.
CLARENCE JOHN BLAKE, M.D.
WILLIAM BREWSTER, A.M.

DECEMBER 18, 1899.

REPORT OF THE COMMITTEE ON INDO-IRANIAN LANGUAGES.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee on Indo-Iranian Languages met early in the year at Cambridge, and there were present Edward J. Young, George F. Moore, Professor in Andover Theological Seminary, and A. V. Williams Jackson, Professor in Columbia University, New York. Professor Charles R. Lanman gave an account of what had been done in his department and of his other labors in connection with it, and he expressed an earnest wish that he might increase the interest in Oriental study among the students by giving to them twice a week for half a year readings or lectures on the religions and literatures of India. This proposition, to offer popular and free courses on subjects comparatively little known, was highly approved by the Committee; but after further consideration it was thought advisable that, inasmuch as two important books are to be published under the auspices of the University which will require careful supervision and involve a great amount of time on the part of Dr. Lanman, these public readings and lectures could be postponed until the books already in hand were finished.

Every facility is furnished at Cambridge for the study of Sanskrit. The College Library in Gore Hall receives all the leading journals, and it has acquired by gift or purchase nearly a thousand Indian manuscripts, which make this collection the largest in America; while the special library in Sever Hall contains pictures and maps, facsimile coins and inscriptions, together with hundreds of photographs and stereopticon slides. All this apparatus is available to the general student; and it is especially helpful to the classical teacher, since Greek and Latin, as well as German, French, and English are descended from one original tongue. Even those who are not Sanskrit scholars cannot fail to see that many of the words commonly used in daily life are similar, if not identical, in all Indo-European idioms. One who was eminently qualified to speak with authority has said that there was a time when the ancestors of the Celts, the Germans, the Slavonians, the Greeks and Italians, the

Persians and Hindus, were living together beneath the same roof, separate from the ancestors of the Semitic and Turanian races. And he affirms that no one who wishes to acquire a thorough knowledge of Greek and Latin, or any other of the Indo-European languages; no one who takes an interest in the philosophy and historical growth of human speech; no one who desires to study the history of that branch of mankind to which we ourselves belong; can for the future dispense with some knowledge of the language and ancient literature of India.

Professor Lanman is the originator and general editor of the Harvard Oriental Series, of which three volumes have been already issued, and the fourth, fifth, sixth, and seventh are in press. The immediate duty now is to complete Professor William D. Whitney's edition of the Veda, and Mr. Henry C. Warren's translation of "The Path of Purity," the author of which has been called the St. Augustine of India. The recent death of Mr. Warren, it was at first thought, might seriously affect the publication of future volumes; but his munificent bequest has assured the continuance of this series according to the original plan, and it will perpetuate the memory of the modest, diligent, and patient scholar who, under great physical disadvantages, accomplished the most creditable results, and has left a name worthy of all praise.

In concluding this Report, it may be mentioned that Professor Lanman has been appointed by the Secretary of State in Washington to represent the United States at the Twelfth International Congress of Orientalists, which will meet in Rome next October.

Respectfully submitted,

EDWARD J. YOUNG.
 GEORGE F. MOORE.
 A. V. WILLIAMS JACKSON.

JUNE 16, 1899.

REPORT OF THE COMMITTEE ON ANCIENT HISTORY, MEDIAEVAL HISTORY AND ROMAN LAW.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

Your Committee on Ancient History, Mediaeval History and Roman Law report that upon several occasions last June they attended the regular oral examinations of candidates for final honors in history, and two general and one special examination of candidates for the degree of Ph.D.; that they also talked with members of the Committee of professors and instructors belonging to the departments of History and Political Science with regard to the courses and the general plan of instruction followed by the departments.

With regard to Roman Law, no course is now given, although we were informed that there had been some lectures given in the Law School on that subject.

It seems to us important, if not essential, that a course in Roman Law should be given in the College, and given as a course in history, much as the course in the constitutional history of England is now given.

Wherever taught, it should be taught in the same way, — not in order to learn the details and minute provisions of the laws, as if they belonged to an existing system now in actual use, — but in order to get the bearing of that system upon the subsequent development of modern jurisprudence.

With regard to Ancient History, the courses announced are numbered 2 and 3 in the Catalogue, and cover the political history of Greece and Rome, but they had not been given owing to the illness of the instructor.

A number of courses in the list for graduates and undergraduates may be grouped under the head of mediaeval history, for we assume that our jurisdiction, so to speak, brings us down through the Reformation period. Histories 5, 6 and 21 relate exclusively to Church History. History 7, covering the period of the Reformation in Europe from the rise of Italian Humanism to the close of the Council of Trent, was omitted last year, and it seems to us unfortunate that a

course on this subject, which is so closely connected with the development of modern Europe, should not be given every year. The courses in Church History are in a way special courses, and no particular attention is given to political and constitutional development, but any one familiar with the course on the Reformation well knows the wide range it covers, and its great importance to the student of general history.

There is something, however, to be said in favor of courses in alternate years, if by that means additional courses can be secured, and equal opportunities given for taking advantage of them.

If with the larger number of courses, some have to be given in alternate years, it seems to this Committee advisable to pursue this course with special rather than with general subjects.

History 8 upon the list, being the history of France to the reign of Francis I, and History 9, being the constitutional History of England to the sixteenth century, are, we understand, courses devoted to a special study of constitutional development in the two countries; and judging from the questions put to those candidates for honors offering History 11, *i. e.*, history of England during the Tudor and Stuart periods, that course is similarly limited and confined. The courses intended primarily for graduates are all devoted to special subjects. The remaining subjects upon the list intended for undergraduates and graduates do not seem to come within the scope of the Committee's work.

In dealing then with the courses given last year, we have only History 1 for the general student, a preliminary course, being a series of lectures given three days in the week and intended primarily for Freshmen and Sophomores, upon mediaeval and modern European history. Ancient history was not taught at all. The course upon the Reformation was omitted. The result was that a student desiring to receive general instruction upon the history of the Roman Empire, the times of the Barbarian invasion — an important study to any one following the racial and political developments of Europe, the revival of learning in Italy, and the growth of the great powers of Europe, had to content himself with one preliminary course, which if he were a Junior or Senior could only count as a half course.

It may be well to remind the Board that not many years ago a series of three courses were given, one upon early Roman history, one upon the history of the Roman Empire, and one upon French history, and, incidentally, the history of Europe; and that at least two of these courses were given every year; and we cannot help

feeling that what may be called political and narrative history has been somewhat neglected, while the study of constitutional subjects has been developed and brought to a very high standard.

There must be many men at Harvard with a keen interest in the study of history who do not feel like taking more than one course a year in that subject, and it is these men who require courses of a wider scope. It seems to us that the special courses are more adapted to graduate study, and that a full course in the study of general history should be a necessary introduction to those courses.

From our attendance at the examinations, which were conducted by a series of committees of the department, we were greatly impressed with the *esprit de corps* shown by the different instructors, and the pleasant relations that seemed to exist between them and the candidates; but it seemed to us that the general trend of the questions seemed to be toward showing a high degree of special knowledge rather than of a general knowledge of the subject, and the proficiency of some of the candidates in their special branches was remarkable, and should have been highly gratifying to the instructors. It is natural that instructors upon a special subject who have given all their time and best thought to research and study in that subject, should overlook the importance of a general knowledge of the century which perhaps is covered by a course devoted to institutions. To illustrate what we mean, we noted that one candidate for honors who had passed a most remarkable examination, when asked some questions by a professor of political economy with regard to the year 1848 in Europe, was completely at sea; and although presenting modern history, showed sad lack of general knowledge of the present century. On the other hand, one of the candidates for the degree of Ph.D. taking the general examination, and being examined on an extremely wide field, covering practically ancient history and the mediaeval and modern history of Europe and Great Britain, showed a most remarkable general knowledge, and surprise was expressed because the candidate was a graduate of Brown University, who had been studying at Harvard for a year in the graduate department.

Much is to be said in favor of the system of specialization. Here of course is found the field for original research, and here is given the training which results in eminent scholarship, makes investigators and real scholars, and adds to the amount of effective knowledge. Generalization has its many weak points and unsatisfactory results, which are only too obvious. It is difficult to reach the best adjustment.

And we are not to be understood as passing any unfavorable criticism upon the methods and systems now adopted at Cambridge. As the pendulum swings back and forth, it will, in the long run, adjust itself. We raise the question, however, whether it is not possible for more provision to be made for the general student.

In conclusion it seems to us that the Departments of History and Government are, comparatively, especially well organized and conducted, and deserve high commendation. And we wish to emphasize our full sense of the immense advance in the opportunities offered, in the facilities afforded, and especially in the character of the instruction, the development on every side, and in the final results, — as compared with the condition of fifty or even thirty years ago. Of this remarkable progress there is, it seems to us, but an inadequate conception generally.

In accordance with the provisions of the Rules and By-Laws of the Board of Overseers, we invited suggestions, etc., from the various officers of the Department, as to any wants or needs. Some, we understand, may be suggested. As they have not yet reached the Committee, it will ask leave to submit them in a supplemental report, should any be received.

All of which is respectfully submitted.

JOHN NOBLE.
ROGER F. STURGIS.
ARTHUR P. STONE.

JANUARY 9, 1900.

REPORT OF THE COMMITTEE TO VISIT THE
MEDICAL AND DENTAL SCHOOLS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

Your Committee has met several times during the year and has visited both the Medical and Dental Schools. The statements made in its report of 1895, and reiterated since, in regard to the inadequacy of the Medical School building, are each year more and more emphasized by the conditions which obtain.

The present building has now been in use for sixteen years, and is no longer sufficient for the needs of the School. The extension of the laboratory courses is, in great measure, responsible for this situation. During the past year another lecture room has been taken and fitted up for laboratory purposes, leaving only three rooms available for lectures. The difficulties might be met radically by a new building in another situation, or temporarily, by one of two expedients, — either making provision away from the present building for some of the departments requiring laboratories, or hiring rooms in the neighborhood of the present building for some of the lecture courses not requiring apparatus. To either of these expedients there seem to be some objections. The radical step of a new building on a new site means a decision as to the most available situation and a large expenditure of money.

During the year there has been a rearrangement of the studies of the first two years. The lectures and laboratory exercises in such fundamental subjects as anatomy and histology, pathology and bacteriology, physiology and physiological chemistry have been condensed into successive half-year periods of those years, the student devoting his whole time to two subjects instead of dividing it among several. The end sought may be described in two words — concentration and gradation. A similar rearrangement of the work of the third and fourth years is in contemplation. A definite judgment as to the effect of these changes can hardly be formed until the result of the final examinations is known. This rearrangement of studies is undoubtedly, to some extent, responsible for the increased inadequacy of the Medical School building.

There has been this year not only a massing of the fundamental studies in the first two years, but also an increased development of teaching by sections instead of by large classes, and at the same time a discussion of methods for facilitating teaching by sections especially by clinical departments, such as the use of recorded cases according to the method now practised in the Law School. It may well be that teaching at the Medical School is in a transition stage from good conditions to still better ones, but it is at least certain that there is no stagnation.

The Dental School is prosperous, and is doing its work well. It too is confronted with the problem of a future home. The building where it now is offers the essential of good light, and is well placed as a centre for clinical material — a matter of much importance to the Dental School, but this building belongs to the Medical School and is liable at any time to be taken under contract with the Massachusetts General Hospital.

GEORGE B. SHATTUCK.

SAMUEL A. GREEN.

CHARLES F. FOLSOM.

DAVID W. CHEEVER.

HENRY F. SEARS.

MORRILL WYMAN.

WILLIAM STURGIS BIGELOW.

HENRY H. SPRAGUE.

MARCH, 1900.

LXXXVIII.

REPORT OF THE COMMITTEE TO VISIT THE BUSSEY INSTITUTION.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Committee appointed to visit the Bussey Institution have done so and beg leave to make the following report: —

The Committee are pleased to adopt as their own the statements of Professor F. H. Storer, Dean, that “in so far as regards the number and character of the students in attendance at the School of Agriculture and Horticulture the year 1898–99 may be classed as one of unprecedented prosperity,” and that “the School has struck root and acquired strength to maintain uniform and continued growth.”

It also appears on investigation very apparent that “owing to the occupancy of a large part and the best part of the stone building for the purposes of the State Board of Health, the instructors in agriculture and agricultural natural history find themselves cramped and crowded at every turn.” (Annual Reports of the President and Treasurer, p. 205.)

The foregoing applies with equal force to the instruction in horticulture.

This matter is referred to by President Eliot on page 29 of his latest report, where he says: “The time seems to be approaching when the Bussey Institution will need for its own use the whole of the stone building which stands on the Plain Field.”

The Committee are of the opinion that the time has already come when the students, especially in horticulture, need larger accommodations in the class room than those now provided.

It also seems a false economy to attempt further repairs on the greenhouses.

These greenhouses were built in 1871 and have been in continuous use ever since, and form the most important apparatus in the horticultural department of the Institution. They should, if possible, be replaced by buildings more in keeping with the advanced condition of the School and adequate to furnish reasonable facilities for the increasing number of students.

The Committee make the following recommendations : —

1. That a large work room for the students in agriculture and horticulture be provided, and that the large unfinished north room on the second story of the stone building be finished off and divided by a partition at such place as shall best serve this need. This will also enable some different disposition to be made, of a portion at least, of the books of the library, which at present loses much of its usefulness for want of room.

This recommendation can be carried out at a small expense and the need is very urgent.

2. That the present greenhouses be torn down and rebuilt. This would involve a considerable outlay, but the cost of present necessary repairs seems out of all proportion to the value of the buildings.

FRANCIS H. APPLETON.
WM. S. HALL.
AUGUSTIN H. PARKER.
FRANCIS SHAW.
C. M. WELD.
LAWRENCE BROOKS.

APRIL, 1900.

LXXXIX.

REPORT OF THE COMMITTEE TO VISIT THE
JEFFERSON PHYSICAL LABORATORY
AND DEPARTMENT OF PHYSICS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The undersigned members of the Committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the laboratory building on Wednesday, May 2, 1900, have the honor to report as follows: —

During the year, the laboratory staff have most successfully accomplished the instruction of nearly four hundred students in the various courses of the physical department; and, in addition to this routine work, they have carried on or promoted a series of original investigations the methods and results of which maintain the reputation of the Laboratory as a contributor to, rather than a mere purveyor of, scientific knowledge. These investigations may be summarized as follows: —

1. The Director, Professor John Trowbridge, has completed what he believes to be the most nearly perfect existing plant for the study of electricity. It comprises a storage battery of twenty thousand cells yielding a direct current of more than forty thousand volts which, by means of suitable transformers, may be increased to more than three million volts. This battery, as the source of the most intense heat yet reached, has been made to produce instantaneous spectra of various metals and gases. For the study of such spectra the battery room contains a spectroscope of the most modern form with numerous ingenious attachments contrived by the mechanician of the laboratory; and for the preparation of spectrum and "X ray" tubes a vacuum pump of peculiar design has been constructed. The fact that this most powerful source of heat brings clearly into view spectral lines which heretofore have been almost unobserved, gives promise of much additional knowledge of the constitution of matter.

One of the most interesting results already obtained with this large battery is the production of "X rays" for the first time by means of a steady battery current. Since such a current can be regulated — which is not the case with any of the currents at present used for "X ray" work — this new method is full of promise. By means of it the "X ray" tube can be made to glow with absolute silence; and, under certain conditions, to emit rays of great brilliancy. This battery affords also the means of studying the wave movements of electrical oscillations ranging from one thousand to one million vibrations a second.

The foregoing remarks but faintly suggest the wide field of scientific research opened by this magnificent apparatus. Moreover, by reason of its noiseless operation, it carries to persons familiar with modern hospital practice a promise that the "X ray room" may ere long cease to afflict suffering humanity with needless terror.

2. Professor B. O. Peirce, in addition to much valuable mathematico-physical literary work, has made a series of measurements of the thermal conductivities of different specimens of "hard rubber" or "vulcanite." He has also, by means of ingenious apparatus, made an interesting study of "The perception of horizontal and of vertical lines;" and, in coöperation with Dr. R. W. Willson, he has prepared a paper on "Thermal diffusivities of marbles and limestones."

3. Professor E. H. Hall has directed a graduate student in a research upon the thermo-electric properties of nickel.

4. Professor W. C. Sabine has continued his work on the acoustical properties of auditoriums, and will shortly begin the publication of a series of papers which will embody the results of his long study in this field. He has also directed Mr. Theodore Lyman in the study of a new phenomenon in the diffraction gratings which constitute the modern spectroscope. This hitherto unnoticed phenomenon has great theoretical significance, and promises to attract much attention.

5. Mr. G. W. Pierce, a graduate student, has completed a paper on the measurement of short wave lengths of electricity. By means of waves about two inches in length he has determined the percentage of reflection from various substances, and has measured the index of refraction of paraffine. His work is thorough and of a high order and involves the exercise of rare mechanical skill and ingenuity.

The Committee are convinced that the Director is striving to make the Jefferson Physical Laboratory the leading laboratory for physical

research in America; and that he is enthusiastically supported by his associates. It is noteworthy that the routine work of instruction is so pressing that many of the results which establish the reputation of the Laboratory are necessarily the fruit of the vacation labors of a loyal staff.

FRANCIS BLAKE.

T. JEFFERSON COOLIDGE.

E. D. LEAVITT.

A. LAWRENCE ROTCH.

MAY, 1900.

REPORT OF THE COMMITTEE ON FRENCH.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The most important change in the French courses has been in the line of administration. Last May the Faculty abolished the Departments of French, Italian and Spanish, and Germanic and Romance Philology, and combined all the courses in one Department of French and other Romance Languages and Literatures.

Professor C. H. Grandgent was appointed chairman. This change facilitates the work of administration and brings into their proper relations a number of courses allied in subject, but separated under the old plan.

Three new French classes have been introduced this year, — an elementary course for the Lawrence Scientific School; one on literary criticism in France during the nineteenth century, which Professor Grandgent says is attended by seven students; and one, French 18, which is a description of French life in the seventeenth and eighteenth centuries. This last course, which attempts to embrace the geographical and political condition of the country, as well as an account of society, and of literature and art during the period, is attended by thirteen students, and under Professor Sumichrast and Mr. Brun will, we think, be very instructive and popular. These lectures are given in English, which, until the students are thoroughly familiar with French, is, we think, desirable, as their attention might be diverted from the subject matter in their endeavor to understand the language.

The Committee considers that the work in all the French courses is done very satisfactorily. The students appear interested, and the teaching is all that could be desired.

T. JEFFERSON COOLIDGE.

J. TEMPLEMAN COOLIDGE, JR.

MAY, 1900.

XCI

REPORT OF THE COMMITTEE ON GEOLOGY AND GEOGRAPHY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

There have come to be three groups of subjects under the Division of Geology: — First, those given under the Department of Geology and Geography, and closely related to its name; secondly, those grouped under the heading Mining and Metallurgy, but still administered under the Department of Geology and Geography; thirdly, those administered under the Department of Mineralogy and Petrography. With the latter, this statement deals only incidentally, as a special committee is appointed to examine it.

The Department of Geology and Geography, although including instruction in a large variety of subjects, — ranging from Geology proper to Geography and Climatology on the one side, and to Palaeontology and Mining on the other, — has been held closely together by an effective departmental organization. A wholesome spirit of sympathetic interest and coöperation prevails among its members, now thirteen in number. The instruction in the various courses is thought to be as well correlated as is compatible with individual freedom and responsibility in teaching.

The subjects now treated under the Department may be classified as follows: —

General Geology. — The courses in General Geology include two elementary half-courses, — one given by lectures, the other chiefly by laboratory and field exercises; a general intermediate course, with four half-courses on special subjects (Pre-Cambrian Geology, Glacial Geology, Geology of the United States, and Experimental Geology); a first and more advanced course in field work; and three summer courses (elementary, intermediate, and advanced). Three courses in Economic Geology cover a special field, related also to the work in Mining and Metallurgy.

In addition to these courses, it is desired to add a half-course on the Geology of Europe; a course on Chemical Geology, probably in association with the Department of Mineralogy and Petrography; and to extend the facilities in Experimental Geology, in which the

work — with its present limitations — is both time-consuming and expensive. It is hoped that occasional courses, to be given at intervals of two or three years, may be instituted on Vulcanism, Organic Geology, Physics of the Earth, History of Geology, and Current Geological Problems.

Palaeontology. — Two general half-courses are given in Palaeontology, open to students who have already some acquaintance with Geology. One of these is given chiefly by lectures, the other chiefly by laboratory work. These are followed by courses of Historical Geology and Advanced Palaeontology.

There is constant need, in connection with these courses, of new material for laboratory instruction, especially of vertebrate fossils, to illustrate the subjects treated in the lectures and the laboratory. There is, furthermore, much need of a laboratory assistant, as the care of the laboratory materials now falls too largely upon the Assistant Professor of Palaeontology.

Geography of the Lands and Oceans. — The courses on Geography include a general introductory half-course; half-courses of intermediate grade on the United States, Europe, and the Oceans (this course being also geological in its nature), and a research course for advanced students. In summer time, a general course, intended especially for teachers, has been given for several years and will, it is hoped, be continued.

To these courses it is desired to add four half-courses, as follows: One each on South America and Asia, and for these subjects available instructors are already on the ground; it is thought that the two courses can be instituted within two years. A similar half-course on Africa, to round out the courses on the larger continents, but it is not thought best to press for the immediate announcement of this subject. A half-course on Exploration, intended for the instruction of persons who intend to travel in little known regions; — this course would cover much of the ground of a course now being given under the direction of the Royal Geographical Society in London. The instructor in such a course should be an experienced explorer, already distinguished for his geographical researches. At the outset, the course might be begun under a lectureship, to be held by different persons at intervals of two or three years.

The need of courses in Economic Geography — or Commercial Geography in its broadest sense — is separately considered below.

Meteorology and Climatology. — Four half-courses in these two subjects are to be given in 1900–01. The first (*B*) is an elementary course, introductory to remaining courses (1, 19, 25). Course 1 is

to be given for the first time next year. It is a second course in Meteorology, extending the work of Course *B*. Course 19 deals with General Climatology, special emphasis being laid upon the relations of climate and man. Course 25 deals with the climates of the two Americas.

The greatest need in connection with the teaching of Meteorology is a small working meteorological observatory, preferably on the roof of a building, in which students may be given an opportunity to use the ordinary meteorological instruments. This is an absolute essential if Meteorology is to be at all effectively taught. On the climatological side the teaching should soon be extended to include half-courses, alternating from year to year, on the climates of Europe, Asia, Africa, and Australia. The climate of North and South America is now considered in Course 25.

Mining and Metallurgy.—The four years' course in Mining and Metallurgy in the Lawrence Scientific School was instituted in 1894. The growth in students since that time is shown in the following table:—

Year.	Students in L. S. S.	Students in M. & M.	Per Cent.
1894-95	308	6	1.95
1895-96	340	7	2.06
1896-97	268	13	3.53
1897-98	410	17	4.14
1898-99	415	19	4.58
1899-1900	495	30	6.06

This table shows not only a substantial and uniform increase, year by year, in the number of students enrolled in Mining and Metallurgy, but also a noteworthy increase in the ratio of these students to the increasing total number in the Scientific School. It is expected that this ratio will continue to increase in the next few years to a final maximum of 8 or 10 per cent.

Courses of instruction in Mining and Metallurgy under the present Faculty of Arts and Sciences were first offered in 1896-97 by two instructors. The subsequent growth in the number of courses given and in the number of instructors has been as follows:—

COURSES OF INSTRUCTION IN MINING AND METALLURGY.

Year.	Half-Courses.	Full Courses.	Instructors.
1896-97	3	2	2
1897-98	4	2	2
1898-99	4	2	2
1899-1900	5	3	3
1900-01	7	4	4

It is desirable as soon as possible to extend the work in these subjects by offering the following additional courses : —

1. Introduction to General Metallurgy.
2. Elementary Metallography.
3. Coal Mining.
4. Mine Surveying, including the surveying of mineral claims.
5. United States Mining Law.
6. The Design of Metallurgical Plants.
7. The Design of Mining and Ore-dressing Machinery.
8. The Lixiviation of Gold and Silver Ores.
9. Electro-Metallurgy.
10. Research in Ore-dressing.

Of these courses it is probable that 1, 2, and 10 will be offered next year by the present instructors. But the others, which will require an addition of two and, perhaps, three members to the present teaching force, must probably be added slowly.

The most pressing need of this Department, namely, that of laboratories, has been supplied by the assignment of the Rotch Building to it by the Corporation; and by the recent bequest of \$5000 by Miss Rotch; and by the gift of \$20,000 by the family of the late John Simpkins, for equipment. A further sum of \$50,000, to provide an income for maintenance, for the employment of a mechanical assistant, and for the library, would add greatly to the efficiency of the work.

Economic Geology. — The courses given each year in Economic Geology are two in number, — namely, a full course, dealing with deposits of the metalliferous minerals; and a half-course, which is mainly concerned with water supply and non-metallic products. It is probable that the latter will be expanded within a few years to a full course, for which the material is ample.

A good beginning in the way of collections for these courses has been made, and room and cases have been provided in the Rotch Building for their display. It is hoped that an exhibition collection will be arranged during the coming year.

NEEDS OF THE DEPARTMENT.

1. *Instruction.* — The direction in which it is desired to increase the list of courses of study has been indicated in connection with the existing courses, as above described. It is not expected that the desired growth can be quickly accomplished; but it is hoped that means may be provided to maintain in the future the steady growth

that has characterized the past twenty-five years. Economy is served by the establishment of alternating half-courses on related subjects; thus the Geology of Europe should alternate with the Geology of the United States; several subjects might be announced, as a beginning, at even less frequent intervals than every other year, as is the practice in other departments; thus, several topics mentioned under General Geology and other headings might be accommodated without great increase of expense. But it is felt that the proposed course on Chemical Geology should be regularly presented as an important member of the series. The same is true of courses on Economic Geography, not represented at all to-day, although worthy of forming a group of instruction by itself; for the economic and commercial aspects of Geography stand in great need of development. The sources of supply of useful materials, especially those derived from plants and animals, and the geographical controls of industries and commerce, afford abundant materials for instruction; first, in a general course, and afterwards in special courses on different subjects or regions. The instruction in this field should be given in correlation with that in the Department of History and Economics, as well as with that in the other parts of our own Department. It should be in charge of instructors who have had training in all these related subjects, as well as practical experience in travel and commerce. It is believed that instruction of this kind would attract a large number of students.

2. *Organization of a Department of Mining and Metallurgy.*—It is desired to make a strong recommendation that the instruction in Mining and Metallurgy be placed in charge of a separate department of that name, under the Division of Geology. The present condition of this work is similar to that in Mineralogy and Petrography when the department of that name was instituted, except that the number of instructors and the number of courses in Mining and Metallurgy is larger. It is believed the further development of this group of technical studies will be favored by the proposed change.

3. *Material Needs.*—The Department of Geology and Geography has outgrown the rooms now at its disposal. As the additional courses above noted are provided, the crowded condition that already inconveniences its work will prove more and more embarrassing. The new accommodations should include two lecture halls, — one of medium, the other of large seating capacity; and the latter should be accessible from out-doors without passing through the building that contains it. There should be a number of laboratories, in which the practical work of the various courses could be carried on; each

of these containing storage room for its own materials. Small rooms for instructors are a great convenience; and additional small rooms for advanced students would prove extremely beneficial; there they could work singly or in pairs, each one having his own table on which his materials could be spread out. Exhibition rooms for a Museum of Geology should be provided. A geographical exhibition room, also, might be made both serviceable and attractive. It is manifest, however, that additional workers will be needed to undertake the additional work of gathering, arranging, and caring for a museum collection.

4. *Non-Teaching Assistants.*—The responsibilities of the teachers do not cease with the completion of their class work. It is desired that they shall creditably represent their subjects of study in the scientific community, and for this purpose individual research and publication is indispensable. There is no lack of willingness or ability in this direction, but the accomplishment is not so large as it might be, because of the constant demands of "little things" upon their time. It is believed that no commercial establishment, at all comparable in magnitude with Harvard University, would tolerate the application of relatively high-paid workers to the low-grade work that is to-day constantly laid upon them. The reason for this condition of things is probably to be found in their tendency to use all the money that can be allowed from University funds for the establishment of new courses of instruction, all the departmental officers being teachers. By the engagement of non-teaching assistants much time could be saved to the teachers. The elementary laboratory course in Geology, for example, might well have the services of such an assistant, to the great relief of the instructors; but the laboratory assistant should be permanently employed, so that the methods that he is taught in his first year may be put into practice in subsequent years. The same may be said of various other courses. It may also be urged that the provision of laboratory assistants would prevent the tendency to wasteful habits of work, and would thus increase productiveness in scientific directions. At present the funds of the Department do not suffice for the payment of the desired assistants.

5. *The Library.*—The Whitney Geological Library is the nucleus about which future collections in this Department must grow. An important step in the development of the library has been made this year in the appropriation of funds by the University Library for the continuation of the periodicals and foreign geological survey reports and maps; but much yet remains to be done in this direction. The better service in the library, — as recently arranged by the Librarian

of the Museum, under whose care the Whitney Library is placed, — is welcomed by students and teachers alike.

The geographical collections, — including text-books, books of travel and exploration, and topographical maps (American and foreign), remain in the general library in Gore Hall. The funds at present allotted for the purchase of new books are insufficient, and there are hundreds of books published since 1850 that are wanting.

There seems no way of making up the deficiencies above noted but by a special fund for the purchase of books related to the departmental needs. \$10,000 or \$20,000 might well be applied as a Library Fund, the income of which should be expended under the direction of the Department.

6. *Gardner Collection.* — This large and valuable collection, increasing annually both in photographs and lantern slides, is an important responsibility. At least half the time of a special assistant could well be given to work in this direction, in selecting new materials, in making lantern slides, in caring for the collection, and in arranging exchanges with other institutions, whereby the usefulness of the collection might be extended far beyond the University walls. It has been the desire of the department to make this collection as useful as possible to outside schools and colleges, by allowing teachers to have access to it as an assistance in placing orders for their own collections. But it is no longer practicable to open the collection to such uses for fear of harm to it. And it is impossible for the members of the Department to take time to select materials for correspondents. Hence much of the value of the collection is lost. It might become a centre of educational influence in Geology and Geography if an active and intelligent assistant were placed in charge of its larger development. A supplementary fund for this purpose would be a valuable addition to the resources of the Department.

7. *Publications.* — Until recently the annual report of the Museum included a report from the officers of the Department, which has been found very useful as a record of the work of successive years. But a reduction of the Museum report to matters more directly connected with the Museum work has deprived them of this opportunity, and they are at present unable to find any equivalent for it. Means of publishing an annual statement of their work would be of practical value. The nearest approach to it is the so-called departmental pamphlet, giving explanatory descriptions of the elective courses, but a large part of their activities, — in fact, all that relates to their non-teaching work, — finds no mention there.

It should be mentioned that a proposition has lately been made by the Faculty of the Museum regarding the use of a Geological Series of the Bulletin of the Museum as a means of publication for work done in the Department, and it is probable that this highly advantageous offer will be accepted.

8. *Departmental Funds.*—Apart from the money paid by the Corporation to the instructors as salaries, the Department usually receives something over a thousand dollars a year for current expenses,—this sum being derived from a small appropriation made by the Corporation, supplemented by the laboratory fees paid by students in certain courses. The income of the Gardner Fund, and the allotment made by the University Library for the purchase of geological books and maps, is not included in this statement.

The departmental fund is now expended partly in maintaining the existing collections,—partly in adding to them, and partly for the expenses of instructors in field excursions. As above noted, it does not suffice for the salary of even a single laboratory assistant. It would, therefore, be of great service to the Department if a special fund were given for the non-teaching needs,—the income of which should be expended by vote of the Department, under approval of the Corporation. One object to which such an income might be directed is the encouragement of field excursions, such as might occupy several days, by paying part of the expenses of students. It may fairly be claimed that such payment is analogous to that made in other departments, like those of Physics and Chemistry, for expensive apparatus. The field is the most important laboratory of the geologist; the materials are provided free, but it is often expensive to reach them.

Summary of Needs.—New accommodations with exhibition rooms, lecture rooms, laboratories, teachers' rooms, and students' rooms, are undoubtedly the most pressing needs of the Department. If the provision of these rooms were accompanied by funds for their care, including the development of museum collections, the Department would be greatly strengthened thereby. Of other needs, it is difficult to make choice of one or another as the more pressing; but a prominent place may be fairly given to an unrestricted departmental fund, wherewith non-teaching assistants could be engaged, and the work of the teachers made more effective and profitable.

Respectfully submitted,

CHARLES FAIRCHILD.
GEORGE P. GARDNER.
RAPHAEL PUMPELLY.

XCII

REPORT OF THE COMMITTEE ON FINE ARTS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

During the Academic year 1899–1900 five courses in the Fine Arts were regularly carried on, three by Professor Moore, assisted in one of them by Mr. Martin Mower, two by Mr. Edward Robinson.

Course 1, conducted by Professor Moore, is devoted to instruction in the Principles of Design, Color, and Chiaroscuro; Course 2, to the Principles of Design in Painting, Sculpture, and Architecture, — and in both of these there is regular practice in drawing. Course 1 was attended by 66 pupils; Course 2 by 14.

Course 3, by Mr. Robinson, is on the History of Greek Art.

Course 4, by Mr. Moore, on the Arts of the Middle Ages and Renaissance.

The fifth course (numbered Course 20) is an advanced course in Classical Archaeology, given by Mr. Robinson, of which the second half is carried on at the Boston Museum of Fine Arts.

In Course 3 there were 179 pupils; in Course 4, 183; in Course 20, 7. The character of the instruction in all these courses is highly satisfactory, and your Committee have no criticisms to pass upon them, and no recommendations to make in regard to them.

But it is obvious that the instruction offered by the University in the Fine Arts is insufficient and, as regards their history, fragmentary, and that a large addition to the corps of teachers of the subject is required to do justice to its intrinsic importance, and to bring it, in the general scheme of instruction in the University, into its proper relation, on the one side, to History and, on the other, to Literature. The true conception of the Department of Fine Arts in the University might be expressed by giving to it the name of the Department of Poetry, — using the word “poetry” in its widest sense as including all works of the creative or poetic imagination. But, in distinction from poetry in verse, those arts to which the term Fine Arts is generally confined, requiring material embodiment, demand of the artist a disciplined refinement of eye or ear, and a trained skill of hand for the adequate expression of his conceptions.

This fact gives them additional value as elements of education, for the study of them develops not only the appreciation of noble modes of expression, but quickens perceptions which are likely, without it, to lie dormant. But their chief importance in education is the cultivation which they afford of the imaginative faculties and their discipline of the taste, — ends of the highest worth generally disregarded in our common schemes of education.

The comparatively recent introduction of the study of the Fine Arts among university courses of instruction accounts in part for the inadequate development of the Department in charge of them. Your Committee would urge on the Governing Boards of the University the need of strengthening and developing it. Four new supplementary courses at least are required. First, a comprehensive course, covering the whole field of the history of the arts, intended for students who may wish to know the general character and the main direction of the arts from the beginning of the historic life of man to the present day. Second, a course in the archaeology of the Fine Arts proper, bringing up the story of the arts to where that of Greek art properly begins. Third, a course in the history of Roman art to the time of Charlemagne. Fourth, a course in Modern Art from 1600 to the present time.

Under each of these four heads, as well as under the courses actually established, there is opportunity for many subdivisions, and for an indefinite development of the work of the Department.

As this work grows and becomes more and more closely associated with work in other Departments, the importance of a Museum of Fine Arts as an instrument of instruction is likely to increase steadily. It is a grave and permanent misfortune to the Department that the Museum recently erected is unfit for its purpose, and is of such design and construction that no alterations which are possible can make it either fit for its object or adequate for the growing needs of the teachers and students of the Fine Arts. In order to provide such imperfect opportunity as may yet be possible for the study and enjoyment of works of art now in the Museum, great and costly changes in the building are indispensable. In order to show what these changes are, an extract from the Annual Report for 1899-1900 of Professor Moore, the Director of the Museum, is appended.

Respectfully submitted,

CHARLES ELIOT NORTON,

Chairman.

*From the Annual Report for 1900 of the Director of the Fogg Museum
of Fine Arts.*

“As time goes on, and we are beginning to acquire important original works of art, the defects of our handsome building become more embarrassing, and the need of radical alterations becomes urgent. Our chief trouble arises from lack of light. So long as our collections consisted mainly of photographs and prints, it was possible to get along tolerably well by placing the storage cases against the ill lighted walls, and the working tables under the sky-lights. But for the paintings now coming to us, which have to be hung on the walls, there is no favorable light in any part of the Museum. Large paintings, like the important one just added to the Forbes Collection, cannot be seen at all in any proper sense. The upper portion of this superb early work is so shaded by the flat ceiling that even the larger details cannot be clearly made out by the eye in any general view of the whole, and the difficulty of viewing the picture is further increased by the reflection of the low sky-light in the glass which covers it. It is very much to be regretted that we are unable to display such a work of art as this so that its true qualities may be seen.

“The low flat top light is not only ill placed and insufficient, but it subjects us to great annoyance and inconvenience in times of snow-fall. At such times the gallery is completely darkened. To remedy this most serious defect of our building I would recommend that the present roof be entirely removed, and a hipped-roof constructed, with sky-lights at least ten feet higher than the present ones, and with no horizontal ceiling inside. Such a change would give us enough light at all times on all parts of the walls. It would also improve the general architectural aspect of the building.

“Another cause of inconvenience, which increases with the growth of our collections, is the lack of any suitable place for receiving and unpacking cases. The only way of access for large cases at present is through the front door, or one of the side doors, directly into the main exhibition hall of sculptures and casts, where the rough work of opening them has to be done on the handsome mosaic pavement. And there is no place where new acquisitions can be safely kept while being made ready for exhibition, unless we use for this purpose, as we are now obliged to do, one of the smaller exhibition rooms, which has to remain closed, sometimes for weeks. The vast basement was rendered useless for any purposes by being practically devoid of light, and by having no way of access from the outside. We have already been obliged to open two large windows on one side of this basement in order to get a place where the work of mounting and remounting photographs and prints could be carried on. By treating the corresponding portion on the opposite side in the same way, and by making in it an outside door, a tolerably con-

venient place for unpacking, with the requisite space for the safe keeping of objects while in course of preparation for their permanent places in the Museum, might be secured."

PROPOSED BY PROFESSOR NORTON.

Resolved, That the Board of Overseers request the President and Fellows of Harvard College to appoint a Standing Committee of five members, of whom two at least shall be members of this Board, and one a member of the Faculty of the College, to which shall be submitted all plans and designs of permanent buildings for the University, previous to their adoption, together with their proposed sites, to the end that the Committee may advise in regard to their adoption or alteration.

XCIH.

REPORT OF THE COMMITTEE TO VISIT THE VETERINARY SCHOOL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Committee appointed to visit the Veterinary School for the year 1899–1900 makes report as follows: —

The condition of the School and Hospital as to order and cleanliness has been commendable.

The care of animals in the Hospital has been most satisfactory considering the accommodations, which are cramped and which are of such a nature that necessary sanitary precautions can only be secured by the exercise of extreme care.

Notwithstanding the many discouragements to which the instructors are subjected in a building but poorly suited to the needs of this department, their earnestness and devotion to the welfare of the School have been noteworthy.

The number of students entering this fall was twelve, being the average number for the last five years. At one time, before the annual tuition fee was raised from \$100 to \$150 the entering class numbered thirty, which was the largest number in the history of the School.

From the statement of the Treasurer of Harvard College it appears that the operating expenditures of the Veterinary School and Hospital exceeded the current income in —

1898–1899 by the sum of	\$2,236.60
1899–1900 “ “ “ “	2,985.69
Interest on previous advances @ 5%, being \$1,220.30	
per year	2,440.60
Total deficit for two years	<u>\$7,662.89</u>

Gifts, not included in the above statement, received during the two years for a Pathological Laboratory in connection with the School and as a fund for a Veterinary Hospital in connection with a School of Comparative Medicine, as proposed in the circular hereto annexed, amounted to	\$9,128.38
Subscriptions, good but not received	2,200.00
	<u>\$11,328.38</u>

Since the beginning of the present financial year another subscription of \$1000 has been made.

In the establishment of a school of Comparative Medicine as an outgrowth of the Veterinary department, the Visiting Committee has taken an active interest. The Veterinary Hospital, for which subscriptions were asked as above stated, is necessary to the success of such a school. In its turn the Veterinary Hospital needs for its best success a Veterinary School in connection with it. Each helps the other. Such a Veterinary Hospital as this community ought to have would practically ensure the success both of the School of Comparative Medicine and of the Veterinary School. The subscriptions already made have encouraged the hope that the proposed plan of development would soon be an accomplished fact and that as a result not only would the Veterinary School be established on a firm and suitable foundation, but also that the way would be paved through the study of Comparative Medicine for discoveries of great moment to the human race.

Under these circumstances it was with regret that on the twelfth day of November current, the Committee, through its Chairman, was notified by the President of the University that the Corporation had decided to take steps looking to the closing in the near future of the Veterinary School and Hospital.

The Visiting Committee of the Veterinary School by

GEORGE G. CROCKER,
Chairman.

NOVEMBER 28, 1900.

HARVARD UNIVERSITY

APPEAL IN BEHALF OF THE PROPOSED SCHOOL OF COMPARATIVE MEDICINE.

The past few years have demonstrated the immense advantages in the medical sciences of the comparative study of man and animals; for this method has led to discoveries of the utmost practical value, has broadened science, and is likely to lead in the near future to great advances in preventive medicine.

It is only necessary to mention the great benefits which have followed the serum treatment of diphtheria and swine plague, the discovery of the action of the thyroid extract, and our increased knowledge of malaria, in order to justify great hopes for like results in tuberculosis, cancer, scarlet fever, and many other infectious diseases of man and animals.

The Corporation of the University are so thoroughly impressed with this fact that they have set apart three hundred thousand dollars, including in it a portion of the munificent gift of the late Henry L. Pierce, to erect and carry on a laboratory, to be named after him, for research on these lines as a part of a School of Comparative Medicine, in the University, which shall have charge of the more advanced methods of medical research and education.

Before the whole plan can be perfected, there remains the one necessity of providing for the erection of a hospital, to be grouped with the other buildings, which will not only supply the most humane and skilful treatment of sick and wounded animals possible, but will permit a large number of important medical investigations upon animal diseases, especially in their possible relations to those of man, which, without this hospital, would be impossible at Harvard.

It is estimated that the cost of erection and equipment of a building suitable for this purpose will be one hundred thousand dollars, and there is also needed an additional fund for endowment.

It is, therefore, now proposed to appeal to the public to raise that amount for this purpose. If this effort is successful, it will become possible to make immediate and great progress in the medical work of the University, the value of which can hardly be overestimated. We trust that this appeal will meet with a generous response.

Subscriptions may be sent to the Chairman or any member of the Committee.

CHARLES S. MINOT, Harvard Medical School,
CHARLES P. LYMAN, Harvard Veterinary School,
FREDERICK H. OSGOOD, Harvard Veterinary School,
WILLIAM F. WHITNEY, Harvard Medical School,

Committee.

The undersigned hereby approve the plan and appeal of the preceding circular.

CHARLES W. ELIOT.
GEORGE G. CROCKER.
HENRY P. WALCOTT.
ARTHUR T. CABOT.
DAVID W. CHEEVER.

XCIV.

REPORT OF THE COMMITTEE TO VISIT THE CHEMICAL LABORATORY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

Since the last report of this Committee, its members have been several times called together at Cambridge, and have maintained an extended correspondence in furtherance of the interests committed to their care.

Through the professors in charge of the Department of Chemistry, a very large amount of statistical information has been gathered and tabulated, pointing for three or four years past to the present climax in the necessities of this department.

In spite of the most ingenious and skilful alterations made in Boylston Hall, the simple fact exists that the pressure for a new and larger laboratory can no longer be concealed or disregarded.

At the present time enough desks cannot be supplied even to enable those students to comply with the requirements of the Lawrence Scientific School who are entered in the school and *obliged* to take a course in Chemistry which this University has not the facilities to give. Moreover, the desks occupied are used in too many cases by at least two students, each hampering the other. The cellar of Boylston Hall is used as a laboratory,—an occupation which in the opinion of your Committee cannot be abandoned too quickly.

The President—in his last published report for 1898–99, pages 34 and 35—calls attention to the needs of the Department of Chemistry, and we urge upon your honorable body for immediate consideration, and we hope, in some way, for immediate action, his recommendations.

We can only feel that the use of Boylston Hall under forced accommodation for so large a number of students, may result in events greatly to the discredit of this University.

The Chairman of this Committee has met many students who have taken a post-graduate course at Harvard under the professors in charge of Chemistry, and one and all have spoken in the highest terms of the instruction given and just as strongly of the adverse general conditions, which check even better work from the instructors and students.

The Chairman has also been made aware that the condition of Boylston Hall has been used, with students en route from the West to the East, as an argument for shunning Cambridge if facilities for the study of Chemistry were desired.

While condemning the use of Boylston Hall, your Committee desires not to pass over the excellent and widely accepted work of the professors of Chemistry in spite of their adverse surroundings. In Organic Chemistry and in correcting the atomic weights of the elements, their work has been quoted and acknowledged in the very front ranks of their profession. Their industry, with the best interests of the University at heart, has been bounded only by their physical endurance.

We append statistics applying to present conditions, showing the deplorable exigency of this department, and with respect beg to submit this our report.

For the Committee,

EDWARD D. PEARCE,
Chairman.

DECEMBER 15, 1900.

STATISTICS.

DECEMBER 1, 1900.

NUMBER OF STUDENTS IN BOYLSTON HALL.

Years.	Smallest.	Largest.
1878-79 to 1885-86	123	169
1886-87* to 1892-93	189	280
1893-94		315

Year.	Students.	Desks.	Desks vacant.
1894-95	442	444	2
1895-96	590	642	82
1896-97	578	654	76
1897-98	618	654	36
1898-99	598	654	56
1899-1900	640	641	1

In the space of five years, the number of students to be accommodated in Boylston Hall has doubled.

Since the laboratory opened this fall, 40 men have been upon the waiting list; of these, 19 have now been assigned desks, although 4 of the 19 were obliged to wait until November 1st.

The number of applicants in Chemistry 1 was about 340, decidedly less than in 1899; Chemistry 3 was so much larger (130), however,

* A new course (Chemistry B) was introduced in 1886-87.

as well as Chemistry *B* (74), that more than 20 of these applicants had to go upon the waiting list. Among those who still are unprovided with desks are *five* students of the *Scientific School*, for whom Chemistry 1 is a PRESCRIBED study.

The year began with 45 men in the organic laboratory, when the room was thought overcrowded last year with 39. In Chemistry 6 and 9 there has been an increase of more than ten per cent. over the numbers of last year. Chemistry 4 has fallen off slightly (42), but there are only two vacant desks.

In the Chemistry 9 laboratory, ten new desks were added during the summer, but there is now but one desk vacant. In addition to these three vacant (quantitative) places, two or three advanced workers in Inorganic Chemistry might find room in the small laboratory which has for many years been devoted to atomic weights. It is intended to remodel this room, and its capacity may be somewhat increased; but elementary students cannot be put there.

NOVEMBER 2, 1900.

Year.	Students.	Desks.	Students without desks.
1900-01	698	651	40

These numbers may not be so (perfectly) accurate as are those from 1878 to (1899-1900), and are necessarily somewhat of an estimate for the period.

REPORT OF THE COMMITTEE TO VISIT THE
LAWRENCE SCIENTIFIC SCHOOL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE :—

The number of students on the rolls of the School is 506, a few more than last year,—the phenomenal increase of recent years having been checked, apparently, by the more severe requirements for admission. These requirements are now somewhat higher than those of other technical schools, and are to be raised still farther. Possibly this may lessen the number of those seeking admission, but, on the other hand, the added facilities for instruction afforded by the new Architectural and Engineering buildings may attract more students. The Committee highly approves the raising of the standard of requirements for admission; thus tending to remove the School from mere competition with other Scientific Schools and duplication of opportunities for instruction offered elsewhere. There are advantages afforded by a technical school which is part of a great university. An engineer, whose life work will be largely confined to details of his craft, especially needs the broadening influences of early association with, and interest in, the humanities.

The new Engineering building will be of great benefit to the School, but its possession will create the need of furniture and equipment, at a cost of about \$30,000. It is hoped that a way to supply this will be found, since a lack of adequate equipment for technical instruction in some of the courses has been a source of concern for several years.

The Committee is glad to say that it believes the School, as now administered and attended, is characterized by earnestness of purpose, diligent work, and results beneficial to the students.

Other questions affecting the School have been carefully and seriously considered, but after much discussion, your Committee does not wish to make any suggestions.

For the Committee,

E. C. CLARKE.
F. L. HIGGINSON.

DECEMBER 18, 1900.

REPORT OF THE COMMITTEE ON GERMANIC LANGUAGES AND LITERATURES.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Committee on Germanic Languages and Literatures begs leave to report that the Department is in excellent condition with one important exception. We refer to the need of a better equipment of the Department Library and to the proposed establishment in connection therewith of a Germanic Museum to illustrate and aid the different studies of the department. The present Library is decidedly inferior to that of both the French and English Departments, and does not afford sufficient opportunity for advanced study. The character of the proposed Museum, as well as its desirability, have been so clearly and fully set forth by the Professors, that we append their statements to this Report instead of attempting to give an abstract or digest of them.

Your Committee believes that \$5,000 would put the Library in satisfactory condition, and that \$15,000 would be sufficient to establish the Museum. As no separate building is needed and only two or three connecting rooms in some existing building, the cost of maintenance would not be great. The Committee has raised by subscription the sum of \$1,878.64 for the Museum. To this sum \$893.33 was added by the production of Goethe's "*Iphigenie auf Tauris*" at Sanders Theatre in the winter of 1899-1900, and from the sum realized this year by the performance of "*Minna von Barnhelm*," under the auspices of the Deutscher Verein \$500 has been assigned to the same object, making \$3,271.97 in all now on hand for the Museum.

We recommend that the Overseers request the Corporation to assign a part of the recent unrestricted bequests of Mr. Henry Villard of \$50,000 and Mr. Barthold Schlesinger of \$2,000 for the joint purpose of the Library and the Museum, giving the Library the preference if both cannot be provided for. This seems to us particularly appropriate, since both of those gentlemen were of German nationality, were friends of the Department and liberal contributors to both branches of the project under consideration, and each of

them would, probably, have contributed further to it if he had lived. Mr. Schlesinger was also serving on this Committee at the time of his death and had taken an active interest in advancing its work. Our recommendation rests on the purely practical ground that the Library and the proposed Museum are, if not essential, at least extremely desirable for the actual work of instruction in the Department. We think they should not await the slow and uncertain process of raising money by subscription and annual dramatic performances, but should at least be put on a reasonable working basis at once from the sources named.

The principal feature recently added to the activities of the Department is the annual production, through the generosity of Mr. Heinrich Conried, the manager of the Irving Place Theatre in New York, of a classical German play at Sanders Theatre. Goethe's "Iphigenie" and Lessing's "Minna von Barnhelm" have already been given with great success and with decided benefit both to the scholarship and to the financial resources of the Department. Mr. Conried has kindly consented to serve upon this Committee and is now a member of it, and his associates upon the Committee desire to place upon record their acknowledgment and thanks for his handsome and unique gift. They think that these performances at the University by a strong professional company are calculated, apart from their immediate and tangible results, to liberalize and broaden the higher education, and to give an added zest to the study and enjoyment of modern dramatic literature.

For the Committee,

HENRY W. PUTNAM,

Chairman.

APRIL 10, 1901.

APPENDIX

THE NEED OF A GERMANIC MUSEUM AT HARVARD

Not so very long ago the study of German in this country was valued chiefly as a means of acquiring facility in reading or speaking a language which has come to be of great practical importance in professional, business, and scholarly pursuits. Indeed, in some parts of the country this is still the prevailing view taken not only of the study of German, but of all modern languages. Greek and Latin are still surrounded with a halo of a time when all higher culture was considered to be bound up with a knowledge of Greek and Roman life; while French and German are not infrequently looked upon as upstarts whose standing in the hierarchy of learning is not yet beyond doubt.

It is, however, clear that for some generations past a change has been gradually coming. The first impulse, as far as German is concerned, was given by the great epoch of German literature at the beginning of this century. When Bancroft and Hedge and Motley returned from their studies at German universities, they brought with them not only a fuller equipment of scholarship, but also a strong enthusiasm for the noble intellectual movement which was then shaping the destiny of modern Germany. Following this, there came the influence of 1848: the March-revolution struck a chord to which the American heart vibrated; and when the martyrs of this revolution sought a refuge in this country, they found here a ready welcome and intelligent sympathy with German aspirations. In the friendship between Longfellow and Freiligrath this twofold affinity between the two countries as to both literary and political ideals may be said to have received its most notable symbolic expression. Next there followed the general adoption of German methods of scientific research brought here by the steadily growing number of American teachers, physicians, theologians who had received the decisive stimulus for their life's work at the universities of Berlin, Göttingen, or Heidelberg. And finally, the dominant position acquired by Germany since the war of 1870 gave the American people a new sense of the dignity of the German nation, and kindled interest in the history of the Teutonic race.

There exists, then, to-day an ever-increasing disposition on the part of Americans to approach the study of German as a study

leading to an insight into a great national civilization. Of the rapidity with which this tendency is developing, the history of the German Department of Harvard University during the last twenty-five years is an index. In 1871-72 there were given two elective courses in German, both of a miscellaneous character. The number of students enrolled in them was 100. Of departmental organization, hardly a beginning had been made. To-day the department consists of ten permanent teachers, namely: one Associate Professor of German, one Professor of German Literature, one Assistant Professor of Germanic Philology, one Assistant Professor of German, and six Instructors. The number of courses offered, apart from the prescribed course in Elementary German, is twenty-nine, and this list includes such courses as the following: History of German Literature, German Literature in the twelfth and thirteenth centuries, German Literature and Art from the fourteenth to the sixteenth century, German Literature from the Reformation to the Classic Period, The Social and Political Tendencies in German Literature of the nineteenth century, Gothic, Old Saxon, Old High German, Middle Low German, Germanic Mythology, Germanic Antiquities, and a Seminary of German Literature and Germanic Philology. The number of students enrolled in these elective courses is about 750.

Gratifying as this development is, it brings into clear relief the need of further important improvements. To one of these, namely: the need of a Germanic Museum, we wish to call the attention of the community at large.

It is a principle now generally accepted that a nation's history cannot be studied adequately without a consideration of its achievements in the monumental and domestic arts. Nowhere does the spirit of a people manifest itself more clearly and impressively than in the buildings devoted to public worship or public deliberations, in the images embodying the popular conception of sacred legend or national tradition, in the appliances for private comfort and security. To the student of Greek and Roman culture nearly all the higher institutions of learning offer at least some possibility of making himself acquainted with the principal monuments of Greek and Roman art. The student of Semitic civilization has an excellent opportunity of examining Assyrian and Babylonian monuments in our own Semitic Museum. The Boston Museum of Fine Arts, in its Japanese collection, gives an admirable conspectus of national life in the Far East. Both the Boston Museum of Fine Arts and the Fogg Art Museum at Harvard contain valuable collections illus-

trating certain phases of mediæval and Renaissance art. But nowhere in this country is there a chance of studying consecutively even the most important monuments of Germanic civilization. Nowhere in this country can the student obtain a vivid impression of the life and customs of our forefathers, from early Teutonic times to the later Middle Ages, such as is afforded by the "Germanisches Museum" at Nuremberg and other European collections. Nowhere can be given an accurate conception of the wonderful Romanesque cathedrals of the twelfth century, of the extraordinary power of German sculpture in the thirteenth, of the exquisite works of German wood-carving in the fourteenth and fifteenth centuries, — or even of the work of such great men as Peter Vischer and Albrecht Dürer.

In suggesting the establishment at Harvard of a Museum devoted to this hitherto neglected subject, we do not wish to enter into a discussion of the aesthetic value of German art. We admit that for the cultivation of the sense of formal beauty the study of Italian art is decidedly more important than the study of German art; although we should not be willing to grant this preference to the art of any other modern nation. What we maintain is the paramount importance of such a collection as this for the study of civilization.

Four or five rooms containing views and reproductions of characteristic works of Germanic industry and art from the earliest times to the sixteenth century might form a satisfactory beginning of such a museum. First in the collection, chronologically, would be photographs and casts of such objects from the neolithic age as may serve to throw light upon the questions of the existence of an anthropologically distinct Teutonic race, of its previous history and of its geographical distribution in Europe. Next there would follow specimens of the characteristic products of the Hallstatt and La Tène periods; models of the earliest habitations in Germanic territory, so far as their construction can be ascertained from actual remains, from imitations in the form of house-urns, and from the descriptions of ancient writers; pictures showing the mode of burial in various epochs, and casts of tombstones with Runic inscriptions. The progress made during the period of the Migrations and the centuries immediately following, in the arts of working metals, of carving and weaving, would be shown by reproductions of objects in the museums of Nuremberg, Mainz, and Christiania, and in the British Museum; the development of navigation by models of boats, from the dug-out of the lake-dweller to the sea-going boat of Nydam and the Viking ship of Gokstad; the advance in architecture by models of the German, the Anglo-Saxon, and the Norse halls as described in the

literatures of the respective countries. German culture during the period from Charlemagne to the Hohenstaufen would be illustrated by photographs of exteriors and interiors of the great Romanesque cathedrals of Aachen, Worms, Speier, Mainz, etc., the Kaiserpfalz at Goslar, the Wartburg and other castles, and by casts of such works of sculpture as the Bernward column of Hildesheim, the brass portals of Hildesheim and Augsburg, the Lion of Braunschweig, etc., etc. The thirteenth century would be characterized by photographs of the great Gothic cathedrals, and by photographs or casts of the sculptures at Freiberg, Wechselburg, Naumburg, Bamberg, Freiburg, Strassburg. For the fourteenth century a selection of sepulchral monuments from the "Germanisches Museum" at Nuremberg would be sufficient; while the fifteenth century should be fully brought to view by representative types of the earlier wood-carving, by specimens of the various schools of painting between the Van Eycks and Dürer, and, finally, by as complete a collection as possible of the works of Dürer, Holbein, Peter Vischer, Adam Krafft, Veit Stoss, Michael Pacher and Hans Bruggemann.

A collection like this could hardly be begun with less than \$10,000. But, if carried out successfully, it would undoubtedly be one of the most useful departments of the University. It would be the first attempt to bring before the eyes of American students a picture of early European and mediaeval civilization. It would, at the same time, be a worthy monument to the genius of a people which has had a large part in shaping the ideals of modern life and which has given to this country millions of devoted citizens.

GEORGE A. BARTLETT,	} <i>Committee of the</i>
KUNO FRANCKE,	
HUGO K. SCHILLING,	
	<i>German Department.</i>

CAMBRIDGE, March, 1897.

PROFESSOR SCHILLING'S SUPPLEMENTARY STATEMENT.

The principal object of the proposed Germanic Museum is the purely practical one of furnishing illustrative material for certain courses of study in Germanic archaeology and mediaeval German literature and art. The value of object lessons in all grades of instruction does not need to be pointed out; its recognition has revolutionized our methods of teaching from the kindergarten to the university and is constantly leading to the establishment of

new museums in connection with institutions of learning. In no department of study, however, would a museum be more variously and more directly useful than in that of Germanic philology and literature. It is impossible to study any phase of human civilization without at least a general knowledge of the whole field; to appreciate the literature of any given period, we must be acquainted with the social and economic conditions, with the political and religious institutions, the state of the arts and industries, the domestic life and its environment, in short with everything that makes for the physical well-being of the people, affects the intellectual and emotional activities, stimulates the imagination, and sets standards of morality and of taste. But it is obvious that a scientific treatment of the history of Germanic culture, as attempted in our graduate course in Germanic Antiquities, will be vastly more attractive and profitable if it is supplemented with a series of object lessons in a carefully arranged museum. This is true of all stages of Germanic culture, but especially of the earliest, down to the middle ages; the historical records begin comparatively late and are at best but scant, while the numerous remains of products of human skill and ingenuity which have fortunately come down to us, throw a flood of light upon various aspects of early civilization. The words of Tacitus would often convey to us but the vaguest meaning if the excavations of antiquarians had not brought to light objects of the very kind to which he refers; the history of South-European influence upon certain portions of the barbaric north would be wrapt in obscurity if the path of the Roman trader were not strewn with the products of southern culture and with their crude native imitations. In later periods as well, when literature begins to develop and historiography becomes more voluminous, we are still obliged at every step to turn to archaeology, to the monuments of sculpture and architecture, and to the miniature paintings and pen drawings in manuscripts, for the elucidation of points which the written records leave in doubt.

But while the proposed museum will be invaluable in the study of the cultural conditions which determine the character of literature, its usefulness if measured by the number of those who are benefitted by it, will be greatest in the study of literature itself. Mediaeval poetry contains countless allusions to objects once universally familiar and hence rarely described, but which are now no longer used or are perhaps so transformed that their mention conveys to the modern mind a wholly erroneous idea; objects which, moreover, underwent radical changes in the course of the middle ages themselves. The old popular epics and the Icelandic sagas deal mainly with the life of

the warrior at home and in the field; they speak of his lordly hall, his dress and accoutrements, his weapons and coat of mail, his dragon-prowed ship; the court epic of the twelfth century is similar in tenor, if more refined, but there is a vast difference between its setting and that of the earlier epic, between the castle of the knight and the hall in the *Beowulf* song, between the equipment of Parzival and that of Hildebrand. A knowledge of these things is obviously indispensable to the student of literature; without it, not only single words, but whole passages, whole scenes and episodes, remain unintelligible or reveal but a tithe of their actual significance; without it, furthermore, the student is unable to appreciate what is in many cases the sole criterion of age in a poem: the more or less archaic character of certain objects mentioned therein. But such knowledge is unquestionably best imparted by means of pictures, casts, and models of typical specimens in their successive stages of evolution; object lessons of that kind will give to the contents of mediaeval literature more reality, more life and color, than the most graphic descriptions.

Finally, the museum will have its uses even in the discussion of purely linguistic topics. Abstract terms, for instance, originate by the figurative use of designations of concrete things or processes; implements, appliances, etc., are primarily named after the functions they perform, or the materials they are made of; some of the oldest set phrases and proverbial locutions were suggested by the appearance or the physical properties of certain familiar objects; in all such cases an examination of the earliest extant specimens of the articles in question may serve to solve etymological or semasiological problems when philology would perhaps be able to offer only conjectures.

Pictures in illustrated works are in the majority of cases more or less unsatisfactory. Apart from the fact that they present only one point of view, they are apt to be on too small a scale to show details; and they often fail to give an accurate idea of the size and proportions of the original. At their very best they are inferior to plastic reproductions, both in interest and instructiveness. Some objects, however, cannot even be shown in pictures, because the originals are totally lost; of the wooden houses and halls of early Teutonic times, for instance, not a trace is left; but numerous descriptive items furnished by poets and historiographers make it possible to construct fairly accurate typical models which will save hours of discussion and will give a far more vivid and lasting conception than words could impart.

REPORT OF THE COMMITTEE TO VISIT THE DEPARTMENT OF ZOÖLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE : —

The Committee on the Department of Zoölogy respectfully report : That they visited in a body the Department in Cambridge, and spent a half day with the Professor and his Instructor ; they surveyed the entire plant and modes of instruction ; and, at their request, Professor Mark called a meeting subsequently of his department, and submitted to your committee a report on the needs of his department, which coincided with, but more fully expressed, the views of all the Instructors. Your Committee accordingly recommend : —

1. A better equipment of the Aquarium ; at an estimated cost of \$1000.

2. A *permanent* fund for publications, of \$25,000.

At present the fund is annual, and has amounted to \$800 a year ; one half given by Mr. Agassiz and one half by the Corporation. The Department wishes to publish "Contributions from the Zoölogical Laboratory" regularly, in order to record what is done for higher education.

3. Some provision for more extensive instruction in Comparative histology and histogenesis, to be combined with (Zoöl. 13) course. This course should cover a whole year.

4. Courses in systematic Zoölogy are needed, when practicable :

(a) on Ornithology and Mammalogy.

(b) on Entomology.

(c) on Parasitology.

5. There is also need of working collections to teach with.

Your committee would express their satisfaction with the rooms, facilities, and modes of instruction ; and the zeal with which higher researches are being pursued.

DAVID W. CHEEVER.

CLARENCE JOHN BLAKE.

WILLIAM BREWSTER.

Committee.

XCVIII.

REPORT OF THE COMMITTEE ON PHYSICAL
TRAINING, ETC.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

I called a meeting of the Committee on Physical Training, Athletic Sports and Sanitary Condition of all Buildings at my house Thursday evening, January 10th, and all responded with the exception of Mr. Robert Bacon and Mr. Theodore Roosevelt of New York.

It was the unanimous sentiment that if the same system of competitions, so successful in the rowing department, should be adopted in all the other branches of athletics, it would result in *equal success*. The doctors on the committee also have found that the system of the rowing has been the means of keeping a much larger proportion of men out of mischief than has been reached by any other method tried before.

It was also thought that considering the enormous amount of work entailed on the Resident Graduate Manager with all the athletics combined, the office should be made a permanent one with a commensurate salary.

The question of the proposed dam across the Charles River was also duly considered and all the members pledged themselves to do everything in their power to carry out our plans for it.

This evening meeting has proved so conclusively that the evening is the best time for all the members of said committee to meet for the *proper consideration* of subjects that come before it, that in the future, while I hold the position of Chairman of the Committee, I shall always call meetings at that time.

Submitted by

GEORGE W. WELD,

Chairman.

FEBRUARY 6, 1901.

XCIX.

REPORT OF THE COMMITTEE ON POLITICAL
ECONOMY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Committee on Political Economy has had this year and last year long conferences with the Professors in the Department, and members of the Committee have also corresponded with the head of the Department.

A very large proportion of the students take Political Economy, and many take the more advanced courses. The courses seem to be satisfactorily conducted and the lecture system is supplemented by conferences and teaching in sections.

A course in Accounting has been taken by a considerable number of students, and next year an excellent programme is proposed for a course in business law. It is intended that such special courses should be confined to graduates or to seniors, and it seems best that they should not interfere with the general and broader courses of instruction in this or any other department.

The great loss to the University and to the Department of Political Economy from the death of Professor Charles F. Dunbar has been referred to by the President in his report.

For the Committee,

ARTHUR T. LYMAN,

Chairman.

JUNE 5, 1901.

C.

REPORT OF THE COMMITTEE TO VISIT THE JEFFERSON PHYSICAL LABORATORY AND DEPARTMENT OF PHYSICS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The undersigned members of the Committee appointed to visit the Jefferson Physical Laboratory and Department of Physics, having attended a duly notified meeting at the laboratory building on Wednesday, May 8, 1901, have the honor to report as follows:—

The number of students in the laboratory is 470, an increase of nearly a hundred over the corresponding number a year ago. Moreover, the fact that elementary physics (principally laboratory physics) was offered by 488 candidates at the entrance examinations last year, is mainly due to the successful efforts of the staff of the Jefferson Physical Laboratory to establish efficient methods of laboratory instruction in preparatory schools. An obvious result of this good service is the raising of the standard of work in physics which may be done by the average student after entering college. Indeed, it is not too much to say that a thorough mathematical training is prerequisite to the acquirement of more than the elementary principles of physical science.

As students fitting themselves for the commercial application of scientific knowledge are naturally drawn to technical schools, it is certainly extremely gratifying to find so large a number of undergraduates at Harvard College electing the relatively difficult courses offered by the Department of Physics. That the prestige of the Department in this regard may be preserved, the Committee suggest that members of the Faculty, when serving as advisers, should impress upon would-be students in physics the absolute necessity of coincident mathematical courses.

The Committee are impressed by the number and the importance of the original investigations undertaken by the Director during the present academic year. These investigations may be summarized as follows:—

1. The magnetic effect of a rapidly moving electric charge. The existence of such a magnetic effect has lately been called in question;

and the subject is of fundamental importance, as the entire modern theory of ions or electrons is based upon the hypothesis that a moving electric charge is equivalent to an electrical current. That it is so equivalent, this investigation has proved by an entirely new method.

2. The insulating properties of paraffine; and the variations in its electric constants due to variations in the wave lengths of electricity. Interesting results have already been obtained, and the investigation will be finished in a few weeks.

3. An experimental study of the sender or oscillator used in wireless telegraphy. This investigation will be finished in June.

4. A further study of the hydrogen spectra, by means of vacuum tubes provided with terminals of different metals. Having regard to the new views of the electric constitution of matter, the problems connected with the action of hydrogen on these metals is a very interesting and important one. Hydrogen freed from atoms of oxygen, in other words nascent hydrogen, appears to have harmonic spectra which can be traced in the sun's spectrum. It is found also that aluminum gives off oxygen when it is used as a terminal in rarefied tubes. It may be that the transparency of this metal to the X-Rays is connected with this peculiarity; and that ozone or antiozone may be formed; and thus may be explained the formation of mists and the production of burns by these rays. These researches promise to extend over several years: but they have already yielded sufficient matter for an important paper which will be published during the coming summer.

5. Measurements of the chemical energy of the sun. This study is made possible by a comparison of the photographic effects of the sun and the discharge from the storage battery of the laboratory. An elaborate investigation has been made of the law of the blackening of sensitive plates by means of the light of the spark from a condenser of known electric value. It is hoped, with reasonable assurance, to estimate the energy of the sun in terms of electrical energy.

Professor Edwin H. Hall is engaged in further study of the "Hall effect," in the hope that he may demonstrate allied effects in iron. This work is a continuation of a general investigation begun by Professor Hall several years ago for the purpose of determining the existence of certain theoretical relations between electrical conductivity, thermal conductivity, thermo-electric quality and all the various transverse effects of which the "Hall effect" is the first discovered and the best known. Professor Hall has also consulted

with Mr. T. C. McKay, in regard to his search for the possible effect of sunlight on the electrical conductivity of gold foil; and with Dr. W. E. McElfresh, in regard to his research on the effects of absorbed hydrogen in palladium.

Professor B. O. Peirce, until his absence from the laboratory on sick leave, directed an investigation of the voltaic cell which has since been finished by his assistant Mr. C. H. Ayres.

Professor Wallace C. Sabine has continued his investigation of architectural acoustics the results of which have already proved to be of great practical value. Professor Sabine has also suggested an investigation in light and has worked constantly with Mr. Theodore Lyman in carrying it on.

Since the report of last year, papers embodying results of investigations in the Jefferson Physical Laboratory have been published under the subjoined titles:—

1. The Production of the X-Rays by a Battery Current. By John Trowbridge. *The American Journal of Science*, Vol. IX, June, 1900.
2. The Spectra of Hydrogen and the Spectrum of Aqueous Vapor. By John Trowbridge. *The American Journal of Science*, Vol. X, September, 1900.
3. Architectural Acoustics, Part I.—Reverberation. By Wallace C. Sabine. *American Architect*, 1900.
4. False Spectra from the Rowland Concave Grating. By Theodore Lyman. *Physical Review*, Vol. XII, No. 1, January, 1901.
5. Indices of Refraction for Electric Waves, Measured by a Modified Radio-Micrometer. By George Pierce. *Philosophical Magazine*, February, 1901.
6. Circular Magnetization and Magnetic Permeability. By John Trowbridge and E. P. Adams. *The American Journal of Science*, Vol. XI, March, 1901.

The work done at the Jefferson Physical Laboratory has attracted to it young physicists from many of the United States and from Canada. During the year, no less than five graduate students have been occupied successfully in physical research. Of these students two are teachers: one a professor in an Ohio University; the other an instructor in the Toronto University. The list of well-trained and mature men who are applicants for scholarships in physics is an unusually large one.

The facts stated in this report strengthen the belief of the Committee that the Jefferson Physical Laboratory is now the leading

physical laboratory in America; and that its plant and the disposition and the energy of its Staff are such as would insure a proportionate increase of valuable results if it were to receive a much larger endowment for original research.

FRANCIS BLAKE.
ELIHU THOMSON.
A. LAWRENCE ROTCH.

JUNE 5, 1901.

CI.

REPORT OF THE COMMITTEE ON MODERN HISTORY AND INTERNATIONAL LAW.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

Your Committee have devoted considerable time and attention to their duty, and some of them have visited a number of courses in the Department of Modern History and International Law. On reflection it seemed to us that either from lack of leisure or lack of knowledge of the methods of instruction we were not competent to examine the different courses with the aim of criticism and suggestions of improvement. We thought therefore that a meeting with the members of the Department in which there should be a free interchange of views and in which we should be learners as well as visitors would better subserve the end of our appointment. We met ten of the Professors and Instructors and devoted an evening to discussion of the matter in hand, considering the academic opinions from the point of view of men of the world. After a long conversation in which the needs of the Department were presented to us and in which our direct questions were met by frank answers, it was decided that the members of the Department should hold a meeting, formulate what they considered the needs of the Department and present this statement to us in writing. This has been done and we beg leave to summarize this report, which is confined to fields of Modern History, American History, and Government. We premise that we leave out of consideration the seminary courses. The work of the students of these courses in learned monographs, in papers presented to the American Historical Association, in teaching at Harvard and other universities and colleges is speaking each year more forcibly for the excellent results obtained in the Graduate School than any trite words of commendation we might express in this report.

The Professors and Instructors inform us that more than one thousand students are now receiving instruction in Modern History

and American History; that "the interest in Government is very strong and is increasing," the following table showing the development.

	1890-91	1894-95	1900-01
Number of courses	5	7	7½
" " students	193	310	607

They further aver that in these subjects more courses are given at Columbia, at Chicago, and at the University of Pennsylvania than are given at Harvard; and they "need each year several courses and half courses on such topics and periods as the following: The Reformation in France; the Tudor period; Germany since 1815; France since 1815; the Rise of Prussia; the Unification of Italy; Eastern Asia in the 19th Century; History of British India; History of Colonization; the Making of the American Constitution, the Slavery Question in the United States; American Territorial Development; Municipal Government; the Government of Dependencies; Federal Government; the History of Political Philosophy; the Organization and Working of the Civil Service in different countries." "These courses," they add, "should be varied from year to year and not repeated oftener than every other year."

It is our judgment that in the United States nothing so generally stamps the educated man, next to a knowledge of the English language and literature, as exact intelligence on questions of history and government. Let any minister, lawyer, doctor, business man or gentleman of leisure recall his business and social intercourse of the past three years and he will not fail to see that a thorough acquaintance with nearly all of these subjects which we have enumerated would at certain times under certain circumstances have been of immense value to him. It is well known to any student of history that he ought to know some one period well, and if, after the necessary elementary instruction, he selects some one of these periods as his own he goes into the world intellectually a stronger man; and such is the constitution of the human mind that, having acquired this interest in some one historical epoch as an undergraduate, the interest will likely remain with him through life, inducing him to keep up with the literature of his subject. A knowledge of these subjects enumerated and others akin to them will enforce the remark of Bishop Stubbs: "The disciplinary benefit of the study of History is to make people honest and intelligent in their view of public events and of public measures and duties, as well as of men and parties; it is a training of the judgment and it helps to train it for other than public duties too, for the patient consideration of pri-

vate as well as public opinion and for individual as well as corporate consciousness."

The Professors and Instructors ended their communication thus :
 "What we need is not so much an increase in the number of professors, as a staff of younger men, assistant professors and instructors, whose compensation is less in proportion to their work and to whom we must look for the future development of this side of our work."

We believe that the Professors and Instructors have shown wisdom in the presentation of their needs, and that instruction in the subjects referred to would be of advantage to the undergraduates and, in other respects, to the University.

Respectfully submitted,

JAMES FORD RHODES.
 WILLIAM F. WHARTON.

BOSTON, June 10, 1901.

I have visited the seminars and found the teaching as admirable as was the intercourse between professor and pupil.

I concur with Messrs. Rhodes and Wharton and add the suggestion that to use as lecturers such Harvard leaders as were Emerson, Motley, Prescott, Parkman, Phillips, and Bancroft, and such as are Choate and Carter in law, Bull and McBurney in surgery, Morrison in bridge-building, and Hoar and Roosevelt in politics would reassure Harvard's primacy as an university, would cure many troubles from lack of income, would give the vitality of leadership of men, and would harmonize Harvard with the people.

W. G. PECKHAM.

DORT, HOLLAND, June 21, 1901.

CII.

REPORT OF THE COMMITTEE ON REPORTS AND RESOLUTIONS.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee on Reports and Resolutions respectfully submit the following:—

The duty of annually revising the list of Committees of the Board to visit the various Departments and Courses of Instruction of the University during each academic year has heretofore been performed by a special committee, annually appointed. The Board will, however, remember that, by vote of November 28, 1900, it was provided that in future this work be done by the standing Committee on Reports and Resolutions.

Acting under the vote referred to, the Committee desire to say that reports during the year have been received from the following Visiting Committees:—

1. On Fine Arts.
2. To visit the Veterinary School.
3. To visit the Chemical Laboratory.
4. To visit the Lawrence Scientific School.
5. On Zoölogy.
6. On Physical Training, etc.
7. On Germanic Languages and Literatures.
8. On Political Economy.
9. To visit the Jefferson Physical Laboratory, etc.
10. On Modern History and International Law.
11. To visit the Bussey Institution.
12. To visit the Gray Herbarium.

The Committee further desire to call attention to the fact that the following changes have been made in the committees as compared with the committees of the previous academic year:—

1. The Committee to visit the Veterinary School has been omitted, for reasons unnecessary to refer to in detail.

2. The Committee on the Course of Instruction in Fine Arts and that on the Course of Instruction in Architecture have been consolidated into one committee, to be known as the "Committee on Fine Arts and Architecture." This change is recommended for the obvious reason that the Courses of Instruction heretofore visited by these two committees were so closely allied as in fact to be analogous. One committee, it is believed, will, therefore, not only simplify the machinery, but will accomplish the object in view more effectively than two committees.

3. A Committee to visit the Department of Instruction has been added, in conformity with the following vote passed by the Board at the meeting of April 10, 1901, and referred to this Committee for consideration : —

Voted : That a Committee of the Overseers be appointed to consider and report upon the Department of Instruction called the Department of Education; and that this Committee have in charge also the subject of the relations of the University to the Preparatory Schools.

Finally, the Committee desire to call attention to a suggestion contained in the report of the special committee which prepared and presented the list of Visiting Committees a year ago. It was there pointed out that the efficacy of the whole system of Visiting Committees depends almost exclusively upon the interest those appointed as Chairmen of the several committees feel in the Course or Department to which they are assigned, and the amount of time and thought they are prepared to devote to committee work. As is well known to its members and the Alumni of the University, this Board is composed largely of men in active life, who can ill afford the time absolutely essential to effective committee work in connection with the various Departments or Courses of Instruction in such an institution as Harvard College has now become. Recognizing this fact, the members of the Board appointed as Chairmen of various committees have not infrequently called their committee together, stated their inability properly to perform the functions of Chairman, and asked to be excused, suggesting the appointment of some other member of the committee as its Chairman. This practice has resulted in placing at the head of several committees men not belonging to the Board of Overseers but who have evinced a desire to interest themselves in the affairs of the University.

Your Committee desire, therefore, to emphasize the fact that it is in the power of each visiting committee to effect its own organization. Those named as the heads of the committees are so designated because they have been considered as most likely to fill the positions

efficiently. If, however, for any reason, a person so designated should desire to be relieved of the responsibility thus imposed, it is in the power of the committee, acting on his suggestion, to make any change deemed likely to increase its efficiency. The work of the committee can thus always be put in the hands of those having the most leisure and greatest disposition to attend to it.

All of which, together with the accompanying list of committees, is respectfully submitted.

By order of the Committee,

CHARLES F. ADAMS,

Chairman.

NOVEMBER 13, 1901.

CIII.

REPORT OF THE COMMITTEE TO VISIT THE BUSSEY INSTITUTION.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Committee appointed to visit the Bussey Institution have done so, and beg leave to make the following report: —

The possibility of carrying out the recommendation No. 1, page 580, of our Report of 1900, was questioned by Prof. F. H. Storer, Dean.

The accompanying letter from the architects of the building, Messrs. Peabody & Stearns, enables us to say that, if the strengthening of the floor can be done without great expense, we adhere to our recommendation No. 1 in our Report of 1900.

FRANCIS H. APPLETON.

WM. S. HALL.

A. HEMENWAY.

A. H. PARKER.

C. MINOT WELD.

LAWRENCE BROOKS.

JULY, 1901.

The recommendation in the Report of April, 1900, referred to in the foregoing, was as follows: —

“ 1. That a large work room for the students in agriculture and horticulture be provided, and that the large unfinished north room on the second story of the stone building be finished off and divided by a partition at such place as shall best serve this need. This will also enable some different disposition to be made, of a portion at least, of the books of the library, which at present loses much of its usefulness for want of room.

“ This recommendation can be carried out at a small expense and the need is very urgent.”

The letter of Messrs. Peabody & Stearns referred to is as follows: —

JUNE 11, 1901.

DEAR SIR: —

Mr. Stearns called at the Bussey Institution Building; Mr. Storer happened to be there and he (Mr. Storer) showed him the room to which you refer in your report.

We do not suppose you know how much load would be put upon this floor, but we told Mr. Storer that it was possible to make it strong enough to hold anything that was proposed. The timber now is a very long span and we do not think it would be safe in its present condition to load it with books, but it certainly can be made strong enough for any reasonable load. Mr. Storer's objection to using it for a library, we think, is that the building is not fireproof, and he apparently believes that it would be better to build a fireproof room for the library, which is becoming very valuable.

Yours truly,

PEABODY & STEARNS.

To F. H. APPLETON, Esq.,
251 Marlborough St.

CIV.

REPORT OF THE COMMITTEE TO VISIT THE GRAY HERBARIUM.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee appointed by the Overseers of Harvard College to visit the Gray Herbarium during the Academic year 1900-01 held a formal meeting at the Herbarium in January. Messrs. Peabody (chairman), Deane, Kennedy, Kidder, White, and Williams were present. Mr. Williams was elected Secretary.

The resignation of Mr. E. H. Abbot from the Committee, owing to protracted absence in Europe, was read and accepted with regret.

The Committee then listened to a report by Prof. Robinson on the work of the Herbarium and discussed with him many details regarding the publications of the establishment, especially the new form of Dr. Gray's "Lessons in Botany" which is being edited for the Herbarium by Mr. R. G. Leavitt and the seventh edition of the "Manual of Botany" which is being prepared by Prof. Robinson and Mr. Fernald.

The financial condition of the Herbarium was then considered in detail. It was decided that another circular signed by the Committee should be sent to 1500 persons, chiefly in Boston and suburbs, stating the nature of the work of the Gray Herbarium, its partial endowment, and need of assistance to meet current expenses. Several members of the Committee signified their willingness to contribute to the sum needed. The meeting was then adjourned.

During the remainder of the year, owing to the absence from Boston of some of the members of the Committee and illness of others, no further meetings were held. However, Messrs. Deane, Hammond, Kennedy, Kidder, and Williams each made one or more informal visits to the Herbarium, and Messrs. Peabody and White held consultations with Prof. Robinson.

The circular of the Committee has to date brought in \$1750, and the members of the Committee have contributed \$2310, during the year toward current expenses. These sums together with the receipts from the endowment and publications of the Herbarium have somewhat exceeded its expenses, but it is not possible to give exact figures until the report of the Treasurer of the College is made up.

EMILE F. WILLIAMS,

Secretary of the Committee.

AUGUST 6, 1901.

REPORT OF THE COMMITTEE TO VISIT THE MUSEUM OF COMPARATIVE ZOÖLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Committee have met at the Museum at least once a year, and at 50 State Street as occasion demanded.

The income of the Museum has been increased by \$1,500 voted by the Corporation of the University and by an annual rental of \$700 from Radcliffe in return for teaching facilities, and by the addition to its permanent fund of \$100,000 from the Henry L. Pierce legacy. The income, restricted and unrestricted, now amounts to nearly \$30,000, thereby filling some needs which the officers of the Museum have long considered imperative.

This increase in income is not sufficient to make good the loss from lessened rates of interest, so that the available funds of the Museum are less now than twenty-five years ago, while the demands upon it have enormously increased. Without the continued munificence of Mr. Agassiz there would be no means of carrying on this great work as at present — a fact which naturally causes some anxiety as to the future.

Since nearly ten years ago, efforts have been made from time to time through Dean Shaler, Professor Goodale, and this Committee to secure \$100,000 to complete the eastern or main portion of the Museum, in order to relieve the over-crowding, which was chiefly noticeable in the laboratories and lecture rooms. These efforts failing, the generosity of Mr. Agassiz, Mr. and Mrs. Quincy A. Shaw, and Mrs. Henry L. Higginson has provided the money for building the southwest corner of the Museum, so that now only one hundred feet of the southern wing is left unfinished to complete the entire great building planned by the late Professor Agassiz. The new building, nearly finished, will accommodate the departments of Geology and Geography and give much needed room to the departments of Zoölogy and Palaeontology.

The collections in the Museum have been increased by gifts and purchases, some of which are quite large, many of which are of great value and exceeding scientific interest; and a great portion of them

have been placed in the hands of experts for examination and classification. Especially to be mentioned are the land shells, reptiles, insects, corals, and pelagic animals collected by Mr. Agassiz in his expedition to Fiji, assisted by Dr. Woodworth; and the extensive collections made by Mr. Agassiz's Albatross expedition, which left San Francisco in August, 1899, and visited seventy-five of the Pacific islands.

Incidental to the Albatross expedition an Ethnological collection was made and presented to the Peabody Museum which constituted their most valuable gift for the year. The Fiji expedition was also supplemented by an expedition to Samoa by Dr. Woodworth to complete his valuable collections and investigations.

Another expedition is to be undertaken by Mr. Agassiz in November of this year, with also the assistance of Dr. Woodworth, which, like the previous two, is to be chiefly for the sake of continuing Mr. Agassiz's investigations in coral reefs.

Until quite recently, a collection of mammals has been very much needed at the Museum. Fortunately, there was a private collection of more than 10,000 specimens, made and owned by Mr. Outram Bangs and his brother, Mr. E. A. Bangs, which would more than fill this need and which, as the Committee learned, could be purchased. This most rare and valuable collection, in its plan and in the preparation of its specimens, filled every exacting demand of the scientist and was obtained by the Committee for \$5,000, a sum so small in proportion to its value that it should be regarded largely as a gift from the Messrs. Bangs.

The collection was in a private house and exposed to danger from fire, and to secure its prompt removal to the Museum the Committee guaranteed the sum necessary to complete its purchase.

Mr. Outram Bangs has been appointed Assistant in Mammalogy, and gives liberally of his skill and time to arranging and completing the collection and to the duties generally incident to his position. He has already added more than a thousand specimens to the collection, and chiefly of South American mammals.

The additions to the library have been about the average and include books and pamphlets belonging to the late Col. Theodore Lyman. The two rooms of the Whitney Library have been assigned, one to geological and geographical serials and the other to the publications of geological surveys and to maps. Upwards of two hundred volumes and pamphlets treating of Ethnology have been transferred to the Peabody Museum, and nearly as many botanical works to the Gray Herbarium and the special libraries of the departments of

Botany. Many duplicates have been transferred to the general library of the University. By a vote of the Council of the University Library upwards of five hundred geological volumes and pamphlets were transferred from Gore Hall to the library of the Museum. It is earnestly hoped that the officers of the central library will continue this policy and in time transfer to the Museum such books in other departments of natural history as are not already there. Such an arrangement would make the Museum library the most complete of its kind and one of the strongest departments of the University. It would facilitate the work of students, and add much to the utility of the books and efficiency of the Museum, as books on systematic natural history are of little use apart from the collections of which they treat.

The reports and bulletins of work done by Mr. Agassiz and his large corps of assistants have continued to maintain their high standard, and, like the Museum itself, stand without a rival. The cost of publishing these volumes has been very large and has been met through the generous gifts of Mr. Agassiz.

The extensive alterations in the delivery-room of the library, including additional stacks for the increasing number of books of reference, and the introduction of water into the extreme eastern end of the building, have done much for the comfort and efficiency of service of the staff of the Museum.

The regular courses in Zoölogy and Geology given in the Natural History laboratories, increasing each year (now attended by more than 800 students, excluding the Radcliffe classes), afford the best opportunity for study, and the excellence of the laboratory work is expressed by the large number and quality of publications by the students in them. A large number of students in these laboratories have been called to positions in other colleges and universities and have been connected with national and state geological surveys.

The use of the Museum by the public and by teachers with their classes has continuously grown until it is now a very large element in its usefulness.

There is as yet no aquarium at the Museum, and the work formerly done by students in Mr. Agassiz's private aquarium at Newport is now provided for at Wood's Holl under the favorable conditions offered by the U. S. Fish Commission.

The needs of the Museum, although in a degree provided for by the increase of income alluded to, are in the main as previously reported by your Committee and are chiefly in the way of providing more and better means of study and teaching and investigations

and classification and care of specimens, and in publication of results of work done. The present income of the Museum, generously aided by Mr. Agassiz's private munificence, is not sufficient to meet these ends.

In recognition of his long service in successful administration of the instruction in Zoölogy under the Faculty of Arts and Sciences, Professor Mark has been appointed, by the Corporation of the University, Director of the Zoölogical Laboratory.

Mr. Agassiz's retirement from the offices of Curator and Director of the Museum marks an epoch of distinguished service for the University which seems to your Committee to deserve some special recognition. While his administrative connection with the Museum ceases, his great scientific service continues as before. The appointment of Dr. Walcott and Professor Goodale as a Committee to take charge of the Museum, and of Dr. Woodworth as assistant in charge, with Mr. Agassiz, of course, as chief adviser, leaves nothing to be desired in the present management.

The Committee would suggest that a joint committee of the Corporation and Overseers, if the Corporation see fit to concur, be appointed to confer with Mr. Agassiz, in order that proper steps may be taken to have his portrait painted and placed in the Museum, as a gift from friends of the University.

CHARLES F. FOLSOM,
F. L. HIGGINSON,
LOUIS CABOT,
DUDLEY L. PICKMAN,
A. LAWRENCE LOWELL,
WILLIAM BREWSTER,
H. S. HUIDEKOPER.

OCTOBER, 1901.

REPORT OF THE COMMITTEE TO VISIT THE DEPARTMENT OF MINING AND METALLURGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Committee appointed to visit the Department of Mining and Metallurgy at Harvard University inspected the Department on March 29th, and beg to submit the following report:—

The course of instruction in mining and metallurgy was first planned in connection with the Lawrence Scientific School in the academic year of 1895-96, but only preliminary instruction was given until the next year, 1896-97. In that year certain courses on mining and metallurgy were given by the Department of Geology and Geography, it being considered desirable to carry on the instruction in this manner until the plans for the new department were matured. These courses increased, and were given in more or less close connection with the Department of Geology and Geography until 1900, when they had become so prominent a feature in themselves that the Faculty constituted a separate Department of Mining and Metallurgy in the Division of Geology. The Department of Mining and Metallurgy, however, always has been, and very properly still remains, in close relationship with the Department of Geology and Geography.

The work from 1896 to 1898 was carried on mostly in the University Museum, while the course in metallurgical chemistry was carried on in Boylston Hall. In 1898-99, the Corporation gave the Carey Athletic Building for the instruction in mining and metallurgy; and in the same year a bequest of \$5,000 by Mrs. Rotch to the Lawrence Scientific School was used in making necessary alterations in the building and in partially equipping it. In 1899 the sum of \$20,000 was donated by the brothers and sisters of John Simpkins, of the Class of 1885, for the equipment of additional laboratories as a memorial to their brother. The Rotch and Simpkins funds have made it possible partially to adapt the old Carey Building to the needs of the new department. Out of the same funds a wing has been added to the east end of the building, for assaying and smelting work; some of the laboratories

have been equipped and some of the more essential apparatus and machinery have been bought. The building is, of course, not as good for the Department of Mining and Metallurgy as one constructed especially for that use, but in the absence of funds necessary for a new building, it can, with the expenditure of a few thousand dollars more, be made to meet the present wants. The work of remodelling and equipping the building has been done by Professor Smyth with admirable judgment, and the money used has been spent to the best possible advantage; but many things requiring further funds yet remain to be done.

The course of instruction in the Department covers four years, and consists of lectures, laboratory work, reading, and field work. The courses for the first two years are closely related to those of the first two years in the Department of Engineering, with slight changes designed to lead the student up to the courses relating more purely to mining and metallurgy in the third and fourth years. Most of the subjects essential to the education of the mining and metallurgical engineer are treated, but lack of sufficient funds for laboratory equipment has curtailed the full development of certain most important branches, especially metallography, electro-metallurgy, lixiviation of ores, coal mining, and the designing of metallurgical plants.

From 1896 to 1899, there were two instructors directly connected with the work on mining and metallurgy; in 1899 a third, and in 1900 a fourth, were added.

In 1895 to 1896, seven students took courses in mining and metallurgy. This number has steadily increased until now the Department includes 46 students, and facilities for instruction, especially in the chemical laboratory, are already far too small for the number of students.

The Department has prospered from its inception, and already includes nine per cent. of the students of the Lawrence Scientific School, having more students than the whole school contained ten years ago. It has progressed much more rapidly than most newly formed technical departments, in spite of the fact that until last year it was without a building, and had to do its work where it could find a chance. The instructors are all active, capable men devoted to their specialties, and thoroughly equipped to manage their respective parts of the work of the Department.

After a careful study of the conditions and needs of the Department, we find that the most pressing wants at present are as follows:—

1. An expansion of the instruction.

2. A more complete equipment of the chemical laboratory, which has already been greatly outgrown, and is in no way commensurate with the requirements of the instruction given in it. The Department cannot do its chemical work in Boylston Hall, where the regular chemical instruction of Harvard University is carried on, as that building is already over-crowded, and, moreover, it is not the place for purely technical work of the laboratory of a Department of Mining and Metallurgy.

3. Laboratories for metallography, electro-metallurgy and lixiviation of ores (chlorination, cyaniding, etc.).

4. A fund for maintenance. The Department has already acquired a considerable quantity of mining and metallurgical apparatus and machinery which requires the attention and care of a skilled mechanic, while attendants for other purposes in the building are required. Moreover, the expenses of water, power and other requisites of the different laboratories have to be met. The Department has had an appropriation of \$250 a year from the Corporation for the last two years, as well as a special appropriation of \$500 for metallurgy. The laboratory fees have this year amounted to \$800. The expenses of the different laboratories have been so far paid from these three sources, but with the increased amount of apparatus and machinery, additional funds will be required for maintenance. With the growing number of students, the laboratory fees will increase, but this addition will not be enough to meet the increased expenses. It has been estimated by those in charge of the Department that a fund which would yield an income of \$1,000 yearly, in addition to the laboratory fees and the yearly appropriation from the Corporation, would be enough to cover the running expenses of the whole Department.

5. More space should be provided in the building for drafting, making models, and for increasing the lecture room facilities. It is estimated by those in charge of the Department that \$3,500 will be required properly to equip the chemical laboratory; \$2,000 to furnish and equip a drafting room; \$10,000 to \$12,000 to build an addition to the west end of the building for increased lecture room facilities, to make a basement for a model-making room, and to equip both these additions.

It is the opinion of your Committee, now that the Department of Mining and Metallurgy has been started and is working on a successful basis, that it should receive the necessary support. Your Committee therefore recommend that an effort be made to secure

the above mentioned funds for the Department. They will add greatly to the efficiency of the instruction, and will also enable the Department to handle a largely increased number of students.

The education of a mining engineer involves the study of probably more different subjects than almost any other technical course. He must be familiar with geology, chemistry, mathematics, physics, electricity, civil engineering, mechanics, metallurgy and assaying, besides other technical subjects. Moreover, he should have a good idea of business matters, and should have a thorough general education in sciences and arts. The life of a mining engineer is often spent in remote regions — far from civilization — in which he has to meet technical, political and business difficulties of all kinds. A man surrounded by these conditions should not only have a technical education, but also the general education necessary to cope with the problems by which he is sure to be confronted. He should be a man capable of becoming a dictator in an isolated community, where he must depend on his own resources to overcome all obstacles and to meet all emergencies, where he is the sole ruler, and where he must know not only how to conduct the purely technical parts of his work, but also how to handle his men, maintain or even initiate a practical organization of the community in which his mine is situated, and make large business transactions. It is an easy matter to educate a man to take charge of a mine or of metallurgical works in the midst of civilization, where he can get assistance and advice at all times, and where most of the business parts of the operation are carried on by others; but to educate a man to take charge of properties in remote regions is a far more difficult problem. With the vast development of mining now going on in western America, Africa, and Asia, the latter class of man is needed, and the demand for his services is rapidly increasing. Many good mining operations to-day are injured or even ruined by the want of such a man. No field of employment to-day offers the same inducements in salary and other opportunities as this does. We believe that with a thoroughly equipped mining department Harvard University can produce a graduate whose capabilities for handling large mining matters will be of a very superior grade, as the instruction in mining can be so interwoven with the general education that a student can obtain not only the necessary technical learning, but also the general education indispensable to a man who is to handle large mining operations.

Before closing this report your Committee would like to refer to the excellent work done by the instructors in the Department of

Mining and Metallurgy. The conception of forming such a department originated with Professor Shaler, Dean of the Lawrence Scientific School, many years ago, but it was not until 1895 that he was able to start it. Since then his advice and assistance have been most important factors in the development of the new Department.

Professor H. L. Smyth, the head of the Department and Chairman of the Committee of the Faculty in charge, has been most successful in gradually increasing and improving the different courses of instruction, and his administration of the department, in rearranging the old Carey Building, equipping the different laboratories and making the best out of the limited funds at his command, has been excellent.

Mr. Sauveur, whose work in metallography has given him a high position in that very important branch of science, has done excellent service in the Department. Mr. White, in charge of the chemical work of the Department, and Mr. Raymer, in charge of the metallurgical work, are deserving of great credit in accomplishing much work with limited facilities.

R. A. F. PENROSE, JR.

Chairman.

NOVEMBER, 1901.

CVII.

REPORT OF THE COMMITTEE TO VISIT THE PEABODY MUSEUM OF ARCHAEOLOGY AND ETHNOLOGY.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

Your Committee are glad to report that, after ten years of persistent effort, instruction in Anthropology in all its branches has been established on a broad basis and its importance to the University demonstrated by the number and character of the students who elect the various courses offered. For the present year fifty-five students are studying these subjects, and it would now seem incumbent on the Corporation to acknowledge the importance of the division by providing more adequate salaries for the instructors. Had it not been for various sums of money received from friends of the Museum it would have been difficult to prevent some of these instructors from leaving us.

Your Committee would regard it as a decided step backwards for Harvard to curtail instruction in these subjects at a time when all the leading institutions of learning in the country are vying with each other in giving prominence to these courses of study.

In previous reports we have called attention to the crowded condition of the exhibition halls and to the impossibility of making a proper arrangement of all the collections until the new building which shall connect the Peabody Museum with the Agassiz Museum is built. There are enough specimens packed away in the basement of the old building to fill the new structure were it in existence. Is there not some friend of the University who will provide \$100,000 for this purpose as well as \$50,000 for maintenance?

The salary of the Peabody Professor is in the opinion of your Committee entirely inadequate, and not only is he obliged to give half of his time to an institution in New York, in order to make a living, but he has to pay the salary of his Secretary from his own pocket.

We find that the University heats the new Semitic building from the boilers in the Peabody building and apparently allows nothing for this, although the consumption of coal is greatly increased. It would seem that the Corporation should allow something to cover this, and also something for the use of the recitation halls used by University students.

As in all departments of the University, what is most wanted is money to provide for the various needs, but it seems to your Committee that this Department suffers from lack of funds more in proportion than any other.

AUGUSTUS HEMENWAY,
HENRY W. HAYNES,
F. L. HIGGINSON.

DECEMBER 11, 1901.

CVIII.

REPORT OF THE COMMITTEE ON THE ADMINISTRATION OF THE UNIVERSITY CHAPEL.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The work of the Preachers to the University in the Chapel and at Wadsworth House is admirable and valuable. The attendance of the students at Prayers, increasing to some extent, their spirit of devotion, and their response to the influences of the services, are full of encouragement.

A year ago the Overseers, prompted by a report of the Visiting Committee, called the attention of the Faculty of Arts and Sciences to the fact that a few lectures had been appointed for the hour which had hitherto been left free for the daily prayers. The cordial spirit in which the Faculty received the suggestion that this conflict of duties should be avoided and a free space be reserved for morning worship, and their prompt and favorable action, gave assurance that the members of the Faculty appreciate highly the value and importance of the daily prayers in the life of the College.

The conviction has been growing upon the Committee from year to year that, if the religious life of the University is to sustain its relative dignity in the development of the University, some marked advance must soon be made.

1. There should be an ample endowment for the support of the services in the Chapel, that the College funds may be released from the obligation of meeting the cost of them, and that the work of the Preachers and the services in the Chapel may be carried on in a stronger and more generous way.

The College is to-day imposing upon the Preachers to the University conditions that should not continue. Men whose time is of great value to the communities in which they live pass six weeks each at the University, and receive an honorarium which is no compensation. The Preachers give of their thought and life, and give gladly and generously.

2. Appleton Chapel does not meet the conditions of the institutional religious life of the University to-day.

Under the system of compulsory prayers, the unattractive character of the interior was partially lost sight of in the great mass of students.

Under the voluntary system, there are one or two services a week when the Chapel is well filled, and six services when there are from one hundred to three hundred students. Such a number in Appleton Chapel serves to emphasize the greatness of space, the barrenness of the architecture, and the hardness of the lines. It is a source of great encouragement that, in spite of these somewhat forbidding conditions, the daily worship has been sustained with the warmth and fervor so characteristic of it. This has been due largely to a sincere desire for worship on the part of the students, a succession of strong preachers, and a fine choir.

With the development of the College, the erection of noble buildings, and the fuller appreciation of ecclesiastical architecture, the time is soon coming — it has come — when the religious life and the worship of the University demand a Chapel better adapted to the voluntary system and more in harmony with the traditions of the past and the taste of worshippers in these days. The Chapel of the University ought to be the noblest, most uplifting and inspiring building in the College precincts: a temple about which will cling the tenderest associations and the richest memories. The Chapel of Harvard University should be so constructed that it will contain a great congregation of worshippers; at the same time, its plan should be such that in some part of the building a body of students may worship with a sense of sympathetic touch and unity and a feeling of spiritual warmth.

For the Committee,

WILLIAM LAWRENCE,

Chairman.

DECEMBER 11, 1901.

CIX.

REPORT OF THE COMMITTEE ON ARCHITECTURE.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

We were not aware until we saw the new Catalogue yesterday that our Committee had been discontinued. As the Committee to visit the Architectural Department we have attended to that duty for several years, and had just prepared this report. It seems proper still to send it to you as the record of our service during the last year or two.

The question of the award of the Austin Fellowship has been referred to us for three years. One year we reported that the work seemed of too low a standard to merit the gift of the scholarship; the other two years, though we advised the award of the scholarship, we at the same time recommended to the Corporation that either the time limit after graduation during which a graduate could make application for this scholarship be extended so that candidates of wider experience could be obtained as scholars, or, if the scholarship were to be awarded to the students it now reaches, that the holder should be instructed to spend his time at some advanced school of architecture like the *École des Beaux Arts*, or stay at Cambridge as a graduate scholar in architecture. Our suggestion is that either the scholarship should reach students of advanced attainments, in order that they may travel and study abroad, or, if confined to the class of young men of promise but little experience, that they should use it for study in some advanced school. We do not know whether our recommendations have been acceptable or not to the Corporation, but we are unanimous as to them.

The gift of a building, furniture, casts, books and drawings, and endowment funds for the maintenance of the building and collections, as well as for instruction, amounting in all to about \$500,000, has made the Department rich in material resources and free from that embarrassing dependence on any fixed number of students which is the burden of most similar institutions.

It would seem, therefore, as if no school of architecture was ever better fitted for furnishing that higher instruction which implies the

most expensive teaching administered to comparatively few pupils. That is the only architectural training for which there is any unsupplied demand in America to-day. Schools of architecture exist now at the following places and the list is chronologically arranged: The Massachusetts Institute of Technology, Boston; Cornell University at Ithaca; The University of Illinois at Champaign, Ill.; Columbia University, New York; Syracuse University; The University of Pennsylvania, Philadelphia; Institute of Fine Arts and Armour Institute, Chicago; Harvard University. Besides these there are more elementary classes at Tulane University, New Orleans, and the Brooklyn Institute, and courses have been established or are to be at Washington University, St. Louis, and the Columbian University, Washington, and at the University of California, and one is talked of at Yale University. To make the Harvard School with its splendid endowment only one more school of the same type added to this already long list would evidently be unlike Harvard.

To emphasize duly appreciation of Mr. Robinson's great gift, and to increase the importance of the School itself, it is much to be desired that it may lose its purely undergraduate rank and be raised to the full dignity of a professional school. We think this change would be more than a verbal one. The social and athletic life of college has its admirable side, but it is chiefly useful to men of the age of undergraduates. We conceive that when a youth begins to study his profession, he had better do so with absolute seriousness, and with such a spirit as that which pervades the Medical and Law Schools. We do not believe this spirit can be fully gained so long as the Architectural School remains a branch of the Lawrence Scientific School, whose students are not to be distinguished from the undergraduate students of Harvard College. We strongly recommend that some action be taken to make it an independent professional school.

When the architectural course was first begun at Harvard our Committee urged that the instruction given therein should be materially differentiated from that given in the architectural courses of the Institute of Technology. It was the desire of the instructors to make it different from other similar courses by offering a greater amount of History, and directing more attention to the artistic side of architecture than to the engineering side. The hope of all who were interested in it was that the course should tempt either advanced students, or else men who sought general culture rather than professional knowledge. This desire, which will be even more natural now in view of the rich resources given the School, has as yet not been

fulfilled. To-day there is not one student taking a course that represents fifth-year or post-graduate work. The courses and the classes are substantially like those in other institutions of a high grade, and the Department as it stands is one more elementary school.

Uninformed persons who wish to exalt courses in architecture already established speak of them as full professional courses graduating full-fledged architects. This misrepresents the facts. They really are elementary courses. People have become used to the fact that for Law and Medicine a course in college and the professional school of at least seven or eight years is necessary. Sooner or later the same thing must be recognized as to architecture. We are told that a man can follow the four years' engineering course of the Lawrence Scientific School or of the Institute of Technology and at once obtain a position and a reasonable salary. He cannot do so in architecture. If on graduation from the architectural classes he gets an opening in a desirable office where there is anything to learn, he is glad to do so with little or no pay. We need not discuss the reasons. That is the fact, and it shows that the four years' course offered in the Harvard Architectural School represents elementary work. The teachers may have very different ultimate views about architecture from those of other institutions, and they may frame programmes of study that look somewhat different, but the final result is that all these schools that have a four-year course teach, a little better or worse, substantially the same thing, viz., the A B C of the art.

Hence arises the need of advanced or post-graduate work, — such work as may take the place in America of that done at the *École des Beaux Arts* in Paris, with which there is as yet no equal here.

Now that, thanks to Mr. Robinson's generosity, this course is without the need of students' support, it would be possible through a high standard for admission or by offering exceptional opportunities to change the School from one of an ordinary standard to one of a high grade. Harvard now has the chance to make its School a distinctly Professional School of the same rank as the Harvard Medical and Law Schools and to step at once into the front rank and be alone there.

It does not by any means follow that there would necessarily be a falling off in the number of pupils. The raising of standards at the Law and Medical Schools has only increased their popularity. At the Institute of Technology, not many years since, there existed a two years' course supported by the less efficient students. Its abolition has only resulted in more students for the whole course or for

fifth-year work. But under the circumstances it is now of no pecuniary importance to the success of the Harvard School of Architecture whether the number of architectural students falls off or not, while it is of the highest importance that Harvard devote these unusual resources to such education as less favored schools cannot give.

Still it is very important for a school of architecture that it should either have many students, or keep close alliance with other schools or private offices in sympathy with its line of work. Advanced students alone, few in number, would not make a complete school. If the elementary classes were continued, as they would be, they would doubtless be of moderate size, and something is still left to be desired. The support of a large number of young aspiring students is very useful. The influence is mutual. The type of the *École des Beaux Arts* seems to be the most successful model for an architectural school. Its student population is large and is scattered in ateliers about the city, and in these the *Anciens* are the leading spirits, and the *Nouveaux* their willing helpers. If we seek for the good influences that can undoubtedly be obtained from a numerous body of students in architecture it is impossible for us as architects to forget that across the river, no farther distant than are the Parisian ateliers from each other, there already exists and flourishes the school of the Institute of Technology. It is well established, with a long line of graduates deeply interested in it and a large attendance of students that have a high reputation for diligent work and professional ardor. One might expect the University atmosphere to be more conducive to advanced work than that of a technical school; but either because the Harvard School is young or for other causes, though several men are engaged in fifth-year work at the Institute, none are so far advanced at Harvard. To bring this successful, prosperous, and well-known school into harmonious alliance with the similar work at Harvard should not be a problem beyond solving. Some unity of action between these schools should be easily possible, and of such a kind that the resources of both should be husbanded and made to do the utmost good. This Visiting Committee, though they have thought much on the subject, cannot pretend to point out in detail how this united action would be most readily obtained. Perhaps it must be a matter of gradual development, but we are very anxious to record clearly our unanimous belief that some steps towards this should be taken. We see that both schools are directed to almost precisely the same ends, and if their highest anticipations were carried out, their product would be almost precisely the same. It is impossible to avoid the

conclusion that each might greatly help the other and that there is a waste of power in permitting two such neighbors to be rivals and to duplicate each other's work while teaching almost exactly the same principles. We believe that future generations will think that we have failed in an obvious duty if we permit a system of competition to continue between neighbors who could effect vastly more if working in unison.

ROBERT S. PEABODY,
EDMUND M. WHEELWRIGHT,
A. W. LONGFELLOW,
R. CLIPSTON STURGIS.

JANUARY 8, 1902.

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